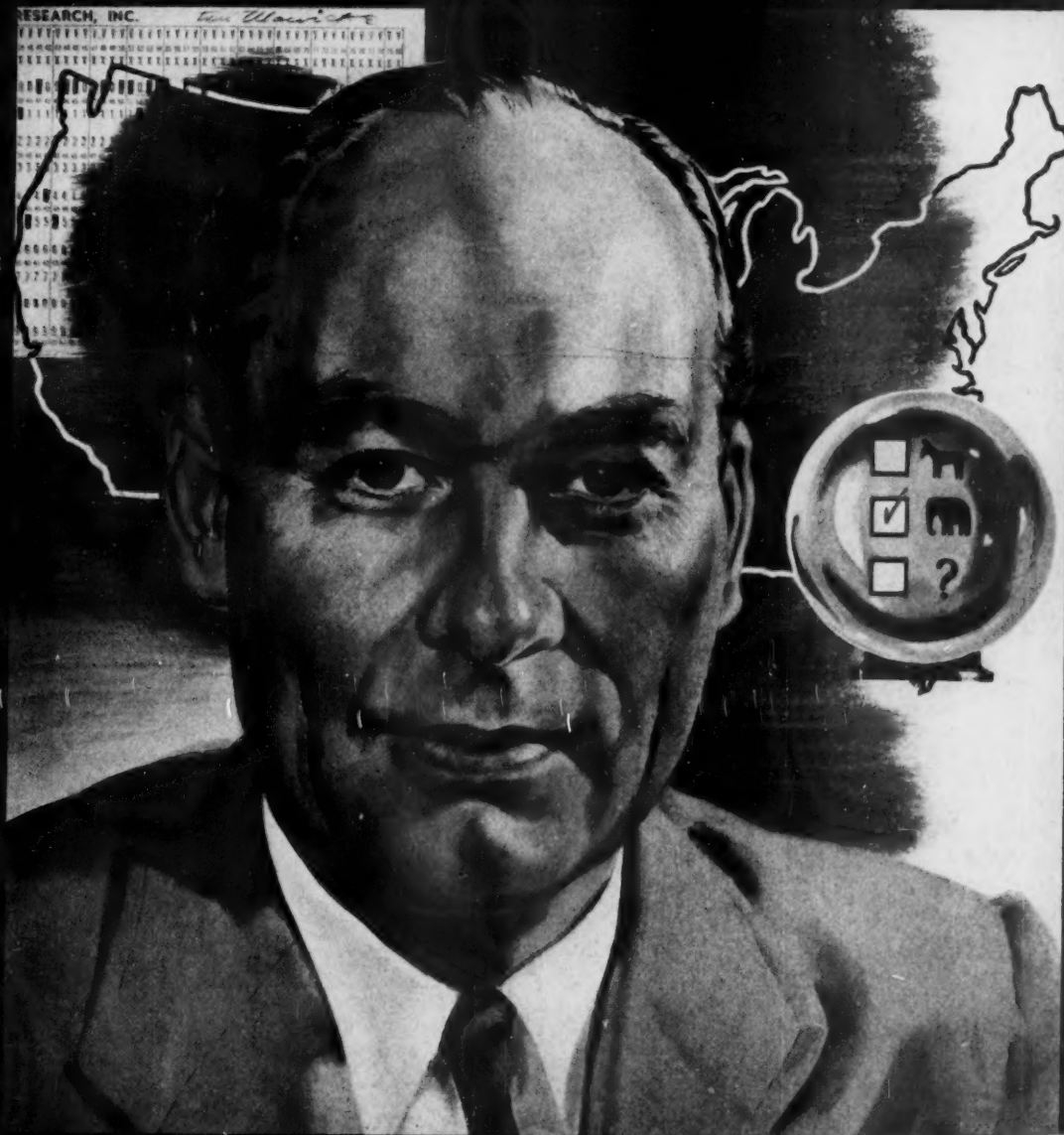


BUSINESS WEEK

JUNE 19, 1948

RESEARCH, INC. *Tom Blanton*



George H. Gallup: He's meeting a quadrennial crisis with a quintamen...



BUSINESS
WEEK
INDEX

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"Why doesn't somebody talk about the United States?"

LAST MONTH a Cleveland woman asked that of her employer. She and her husband, born in Europe, had gone back just before the war, to share in the "people's government—everything for the people". Her husband didn't like what he found so they shot him.

"If people here only knew what they have", cried his widow, "they would fight to save it, not tear it down by quarreling. They talk for this greedy little group or that. Why doesn't somebody talk about the United States?"

The United States—

- where 63.9% of the whole nation's income is paid to *workers* while only 4.9% goes to the *owners* as dividends. (Balance goes for materials and taxes).
- where during the worst depression in history, corporations paid millions of dollars in wages out of their savings—millions more than they were making—and so helped keep workers they didn't need on payrolls instead of relief rolls.
- where 80% of all businesses fail in 10 years yet where the *hope* of profit keeps others going, keeps them forming, and out of the few which succeed come the General Electrics, the General Motors, the U. S. Steels which provide hundreds of thousands of jobs.

—where industry—owned, managed, staffed by free men—produced more for war in 3 years than all the rest of the world combined, including those totalitarian allies who were so busy *talking* about "the people" that they couldn't produce enough to save them.

—where free men, producing more with "capitalist" machinery, are the only hope of the rest of the world—the only chance of preventing starvation in the lands where "everything is for the worker".

Yes, it *is* time somebody talked about the United States.



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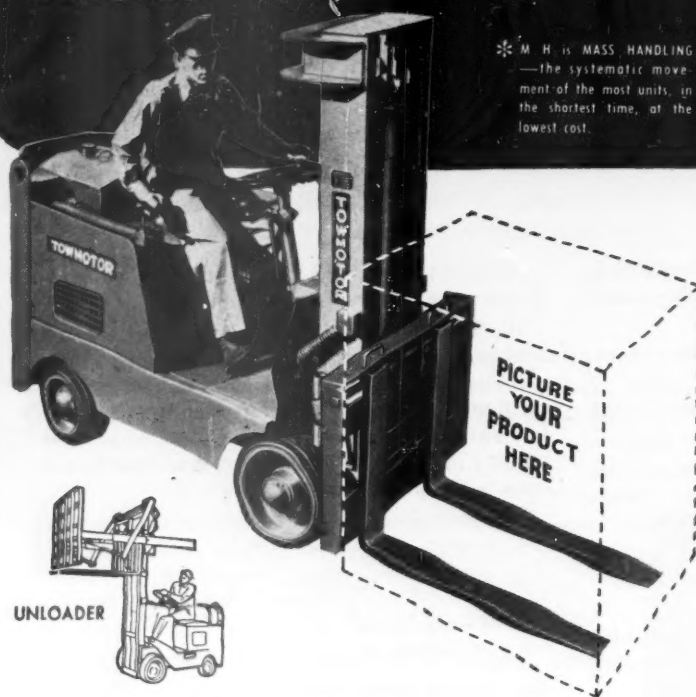


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BUSINESS WEEK • June 19, 1948

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confidence when you
see the Pedigree . . .

and in Boxes!



CONFIDENCE IN *Quality*
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YES, Union corrugated containers are pedigreed stock. They are made from 100% virgin Kraft, in the largest pulp-to-container plant in the world. Every production step is checked by a single management. And four modern box plants, strategically located, are ready to service rush orders.

Since 1872 Union has been a leader in engineering, designing, and producing paper packaging. Ten years

ago, Kraft container board was added to the line and in a short time Union became one of the nation's larger producers in this field, too.

Now Union container board is going into Union's own corrugated containers, identified by the famous Union shield. This shield on a corrugated container is a mark of consistent quality, consistent service, and always fair price.

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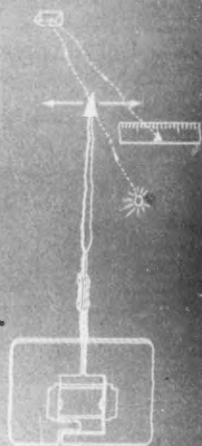
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Contributions To the Heritage of American Industry



the frictionless mechanism that made history

Twenty years ago, American industry was dependent on precision measuring instruments from Europe. About that time, Sheffield Research Engineers inaugurated the development which not only emancipated American industry from European influence in precision but has given the United States world leadership in precision measuring instruments concurrently with its leadership in precision manufacturing generally.

These engineers applied a new mechanical principle to precision measurement—the Reed Mechanism which operates without friction. It was the heart of the Electrichek, a truly American Comparator, the original of which is now on exhibition at the Smithsonian Institution.

Soon thereafter, the weightless light beam lever arm was added to the Reed Mechanism to produce the now famous Visual Gage, which is today in wider use by industry than any other precise gaging comparator. It is wise and thrifty to specify Sheffield. 2848

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THE DEPARTMENTS

Automotive	54
Business Abroad	117
Business Outlook	9
Cities	28
Finance	91
International Outlook	118
Labor	102
Marketing	80
The Markets	100
New Products	70
Production	58
Readers Report	74
Research	39
The Trend	124
Washington Outlook	15

THE COVER

Iowa-born George H. Gallup parlayed his Ph.D. thesis into the Gallup Poll. That dissertation was "Objective Methods for Measuring Reader Interest in Newspapers." It led to the development of comic strip advertising and to the now-standard advertising display of integrated picture, brief headline, and associated copy.

It also led Gallup from journalism faculty posts to director of research, then vice-president of the advertising agency, Young & Rubicam—a position which he resigned last year to give his full attention to the American Institute of Public Opinion and Audience Research, Inc.

It makes him, today, at 47, the outstanding authority on what America thinks and one of the nation's top market research specialists.

• **Proves the Obvious**—"It's the only business in the world where you can't sell a dollar bill for a nickel," Gallup says of market research.

His reason: "Good research proves the obvious." And who wants to pay a big bill for learning something he could have figured out for himself if he had only taken the trouble to think about it?

Of course it rarely works just that way. When confronted with the results of an expensive research job which makes good sense, the client likes to believe he could have deduced as much for himself.

• **Sticks to Princeton**—Gallup won't act as a business consultant, move to Hollywood, or forecast the future—three things he's often invited to do. Instead, he works and lives in Princeton, N. J.—where, like Iowans anywhere, he puts his money into land.

A big, beefy, comfortable personality, George Gallup is a combination of salesman and theorist. He's managed to sell some hard-boiled, skeptical clients a dynamic theory of how to take the public pulse.

—Complete Gallup story starts on page 39; cover painting by Tran Mawicke

BUSINESS OUTLOOK

BUSINESS WEEK

JUNE 19, 1948



Two things now hold the key to production—and probably prices:

- (1) Ability of the steel industry to meet all demands upon it.
- (2) Government policy on stockpiling of strategic materials.

Your clue to how things are going in steel is easy: Watch the output rate published every Monday afternoon from industry-wide figures compiled by the American Iron & Steel Institute.

This figure has a particular significance now. Steel making seems to hit a ceiling between 96% and 97% of capacity.

Why can't the industry push up to 100%? Simply because it has to run hand-to-mouth on three basic raw materials—scrap, ore, coke.

More steel-making capacity wouldn't necessarily mean plenty of steel for all.

If the industry can't get the raw materials to run present facilities full blast, it can't get them to feed bigger and bigger mills.

Thus, until existing plant is running at 100%, don't look for any miracles through expansion.

Stockpiling is bound to put some handicap on manufacturing.

In the very nature of things, the military tends to prepare now for any crisis which may come later.

Light was thrown on that this week. The House Appropriations Committee made public testimony by Munitions Board Chairman Thomas J. Hargrave; he says bluntly that a stepped-up program is necessary.

Noting that industry has had "more than two years to reconvert," Hargrave continues: "The time has arrived when we must think more strongly in terms of national security in the event of a future war."

Government stockpilers may have to go slow as in the past. They can't very well afford to start prices of metals soaring.

Yet their determination to step up buying means that supplies of critical metals will get no better. They might get worse.

It doesn't take much stockpile buying to firm up prices. Remember what happened in zinc?

Here is a refresher, just in case. Zinc supplies became fairly ample last year. So stockpiling was started. The government cleaned up the market and, zingo! Up went the price.

This could happen much more easily in lead or copper.

Producers of most metals aren't anxious to see a price rise now. This goes for copper, zinc, and lead.

Steel, however, is pointed higher—along with wages. It may just be a restoration of the level prevailing before the recent cut. That, however, would not fully reflect rising costs; there may be a flat boost.

Prices of most of the products used by industry keep creeping higher.

This necessarily, ultimately affects end products. Evidences are visible in scattered fields this week—ranging all the way from a number of chemicals to motor trucks.

The average of all commodities at wholesale is back within a shade of

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
JUNE 19, 1948

the January peak. The index of prices other than farm and food products—essentially industrial materials—didn't join in the February-March break; these now are a couple of points higher than in January.

Rising material costs, combined with higher wages, will bring more price rises on both producers' and consumers' goods.

•
Two things alone are preventing a rise in petroleum prices:

- (1) Opposition by leading companies to any such move.
- (2) Ability of the industry to go on smashing all output records.

Production of crude oil now is up to 5,475,000 bbl. a day. At the start of this year it was around 5.3-million; a year ago, 5.1-million.

Before the war, we didn't reach 4-million bbl. until the fall of 1941.

•
Chances of serious gasoline shortages this summer—and of fuel oil next winter—are being minimized by unprecedented refinery output.

The big motoring season starts in April. Gasoline stocks in storage generally go down from then until after Labor Day.

During April and May of this year, refinery activity averaged 15% higher than a year ago, according to the Oil & Gas Journal.

Result: Stocks in storage actually were built up in those two months.

And not just stocks of fuel oil; gasoline storage stocks rose, too.

•
Communist-beset governments in Western Europe will be strengthened this year by food—more bread than at any time since 1939.

This is assured by (1) good crops in Europe, and (2) the prospect of the second largest U. S. wheat crop in history.

Unless weather nips our spring wheat, all wheat production in this country should come close to 1.2-billion bu. in 1948.

Rains the last few days have dispelled drought scares in the Corn Belt. Thus, we may easily produce 3-billion bu. of corn.

In that case, little wheat would be needed to feed livestock. Most of the bounteous crop will feed humans—at home and abroad.

•
Commodity prices in futures markets long have forecast a thumping come-down sometime. That is, nearby futures have sold at towering premiums over those for more distant delivery.

That adjustment finally has come about in one market—wheat.

Early this week, you could buy wheat for delivery in July of this year or May of 1949 (and anytime in between) at a variation of only a fraction of a cent. It was \$2.28 a bu. (Chicago) across the board.

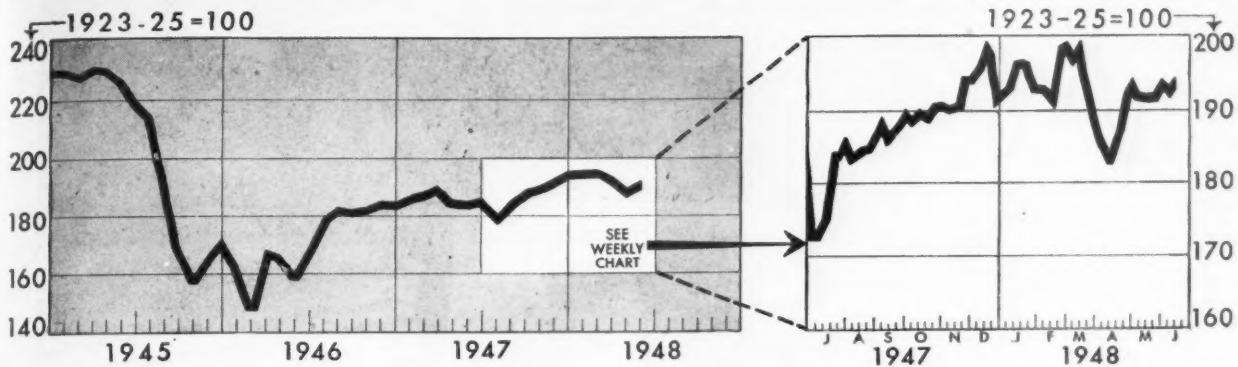
Wheat, in short, is perched just above the government support price.

•
World sugar production this year will be within 2% of the prewar average. But, instead of all nations getting their prewar shares, there is a surplus—simply because many nations can't afford to buy.

Cuba is contributing about 6.6-million tons to the world's 34-million total. And Europe can't spare the dollars to buy Cuba's surplus.

Army shipments to Germany and Japan and relief for Italy and Austria are helping, though. These have taken 446,400 tons of Cuba's 1948 grind.

FIGURES OF THE WEEK



Business Week Index (above)

\$ Latest Week	Preceding Week	Month Ago	Year Ago	1941 Average
*194.4	†193.3	190.9	186.8	162.2

PRODUCTION

Steel ingot operations (% of capacity).....	96.0	96.1	95.4	95.8	97.3
Production of automobiles and trucks.....	109,688	†75,607	83,275	97,943	98,236
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)....	\$27,217	\$25,297	\$22,022	\$19,388	\$19,433
Electric power output (million kilowatt-hours).....	5,132	4,845	5,109	4,702	3,130
Crude oil (daily average, 1,000 bbls.).....	5,480	†5,471	5,423	5,113	3,842
Bituminous coal (daily average, 1,000 tons).....	2,361	†2,278	2,123	2,222	1,685

TRADE

Miscellaneous and L.C.L. carloadings (daily average, 1,000 cars).....	84	84	83	84	86
All other carloadings (daily average, 1,000 cars).....	67	67	63	66	52
Money in circulation (millions).....	\$27,864	\$27,895	\$27,762	\$28,253	\$9,613
Department store sales (change from same week of preceding year).....	-4%	+19%	+6%	+7%	+17%
Business failures (Dun & Bradstreet, number).....	110	91	100	66	228

PRICES (Average for the week)

Spot commodity index (Moody's, Dec. 31, 1931=100).....	427.5	426.1	419.1	401.9	198.1
Industrial raw materials (U. S. Bureau of Labor Statistics, Aug., 1939=100)...	276.2	277.0	276.4	262.3	138.5
Domestic farm products (U. S. Bureau of Labor Statistics, Aug., 1939=100)...	394.6	394.3	382.0	356.6	146.6
Finished steel composite (Steel, ton).....	\$80.27	\$80.27	\$80.27	\$69.82	\$56.73
Scrap steel composite (Iron Age, ton).....	\$40.66	\$40.66	\$40.66	\$33.25	\$19.48
Copper (electrolytic, Connecticut Valley, lb.).....	21.500¢	21.500¢	21.500¢	21.500¢	12.022¢
Wheat (Kansas City, bu.).....	\$2.31	\$2.39	\$2.42	\$2.41	\$0.99
Sugar (raw, delivered New York, lb.).....	5.21¢	5.27¢	5.05¢	6.19¢	3.38¢
Cotton (middling, ten designated markets, lb.).....	37.10¢	37.53¢	37.88¢	37.45¢	13.94¢
Wool tops (New York, lb.).....	\$2.011	\$1.996	\$1.965	\$1.500	\$1.281
Rubber (ribbed smoked sheets, New York, lb.).....	22.70¢	22.70¢	23.49¢	16.65¢	22.16¢

FINANCE

90 stocks, price index (Standard & Poor's Corp.).....	134.8	132.7	130.1	118.7	78.0
Medium grade corporate bond yield (30 Baa issues, Moody's).....	3.34%	3.34%	3.37%	3.22%	4.33%
High grade corporate bond yield (30 Aaa issues, Moody's).....	2.74%	2.75%	2.77%	2.55%	2.77%
Call loans renewal rate, N. Y. Stock Exchange (daily average).....	1½%	1½%	1½%	1½-1½%	1.00%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	1½%	1½%	1½%	1%	4-½%

BANKING (Millions of dollars)

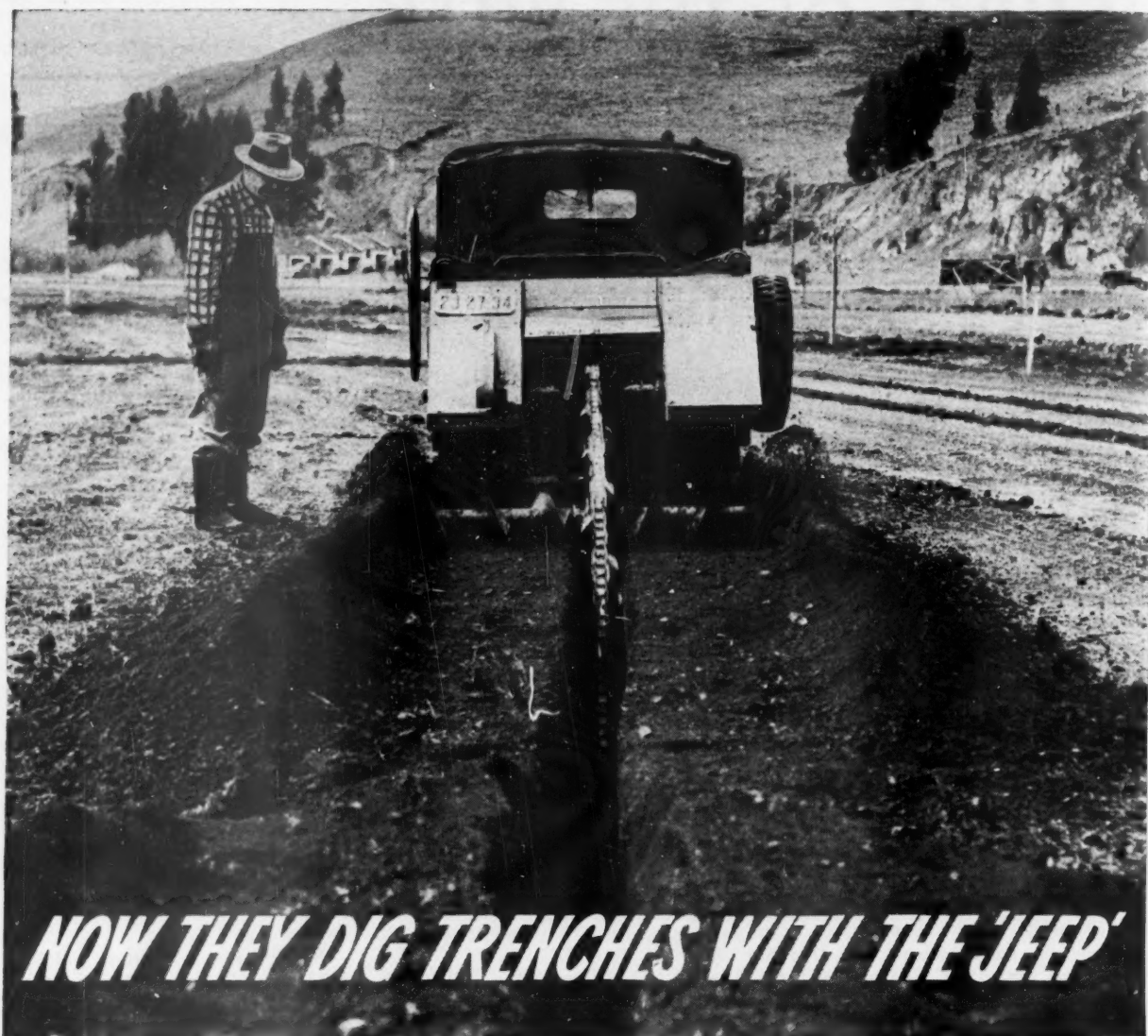
Demand deposits adjusted, reporting member banks.....	46,996	46,646	46,373	46,779	††27,777
Total loans and investments, reporting member banks.....	63,426	62,936	63,174	62,970	††32,309
Commercial and agricultural loans, reporting member banks.....	14,152	14,113	14,255	11,763	††6,963
Securities loans, reporting member banks.....	1,819	1,830	1,650	2,277	††1,038
U. S. gov't and gov't guaranteed obligations held, reporting member banks.....	35,667	35,218	35,499	38,817	††15,999
Other securities held, reporting member banks.....	4,195	4,197	4,228	4,073	††4,303
Excess reserves, all member banks.....	920	920	930	667	5,290
Total federal reserve credit outstanding.....	20,955	21,292	21,038	22,040	2,265

*Preliminary, week ended June 12th.

†Revised.

‡Date for "Latest Week" on each series on request.

††Estimate (B.W.—Jul. 12 '47, p. 16).



NOW THEY DIG TRENCHES WITH THE 'JEEP'

**'JEEP'-PROPELLED MOBILE TRENCHER
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**The UNIVERSAL
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WASHINGTON OUTLOOK



CONVENTION KIBITZERS' GUIDE:

As you sit by your radio or your television set, the Republican convention will seem to be pure madhouse—a jumble of noise, state banners, roll calls.

But you can make sense out of it if you know what the politicians are up to. There are signals that you can catch. Watch these, and you will be able to tell the fellow next to you what the pitch is.

First ballot:

By the advance form sheets, nobody wins on this one. It takes 548 of the 1,094 delegates to nominate the man who is probably going to be your next president.

Dewey is scheduled to come up with 300 votes, give or take a few. Taft is on the book for 250, maybe a few more. Stassen is expected to get 200, maybe a few less.

The rest will be scattered in a dozen places, nominally cast for local "favorite sons" but mostly held back for a strategic moment. Some of these, of course, really belong to one or another of the Big Three; normally a candidate doesn't parade his full delegate strength on the first ballot.

There's a convention maxim that says you lose unless you get more votes on each succeeding ballot. Thus, every front runner keeps something in reserve this first time around.

So, about all you can tell on the first ballot is the style of the players. For instance, if Taft should pile on more votes than Dewey, that just means he is taking a long chance, trying to shock the delegates into a bandwagon mood.

Such a move would have to pay off fast, or not at all.

Second ballot:

All three front runners should gain votes on this roll call. But it won't mean much—they'll just be uncovering some reserve support.

The decisive states that are really uncommitted aren't apt to jump on this round.

Perhaps the key thing you can do is to check your impression of Dewey's chances. What everyone wonders about Dewey is how much hidden strength he has. If he has it, he will have to expose a fair chunk here.

Third ballot:

This is the ballot on which Dewey expects to win.

The other candidates know this, too. So, on the third ballot the game begins to be for keeps.

Most of the pledged support of each candidate will be thrown in. The first of the waverers will begin to show their hands; each of these hopes to hold off until he can launch a bandwagon for his favorite, but he dare not miss the winner's bandwagon.

The Vandenberg people might start upsetting things here. If Dewey seems to be winning as the roll call proceeds, they might try to manufacture an artificial deadlock to insure their man his big chance (it can come only on later ballots).

Watch for something like this: unexpected votes cast for Taft or Stassen—whoever is second-runner—by New Jersey or Pennsylvania.

Don't be fooled by this into thinking Taft or Stassen is really gaining. The idea would be simply to stifle any stampede to Dewey, keep the balloting going.

After that:

It's now obvious that no one is going to win on the strength that he brought with him to Philadelphia.

So your tipoff can come in two ways:

(1) A shift of a big bloc of votes away from any of the Big Three.

(2) The shift of a big "favorite son" state like Warren's California to any other candidate.

The "dark horse" candidates—Vandenberg, of course, is the one most talked of—are on an equal footing here with the leaders. And the longer the balloting goes on, the closer you should keep your eye peeled for a dark horse.

It's state-by-state that the votes come in. And to read the signs you need to know which states are significant.

To start with, you have the states that are openly committed to one or another of the major candidates; they'll drop into place on the first ballot. You can forget them, unless they later desert—for example, a Texas shift away from Taft.

The ones to watch are the "favorite son" states. These come in two brands: (1) states that vote a favorite son to mask their real preference, and (2) states that vote a favorite son until they can make up their minds where to go.

The favorite son states that know where they

WASHINGTON OUTLOOK (Continued)

are going to go are generally considered to line up like this:

For Dewey—Indiana, Washington.

For Taft—Illinois, Tennessee.

The thing to watch for from these is the unexpected; if Illinois switches from Gov. Green to Taft it means nothing, but if it switches to Dewey, something's cookin'.

Then there are the "open-minded" states; when any of these abandon their favorite sons, take note: It means business. Here's the list:

California—53 votes for Warren. A shift here would be doubly significant because Warren has half-serious hopes for himself.

Connecticut—19 for Baldwin.

Massachusetts—35 for Saltonstall.

Michigan—41 for Vandenberg. Even more than California, Michigan thinks it's riding a real contender.

New Jersey—35 for Driscoll.

Pennsylvania—73 for Sen. Ed Martin. This is the biggest uncommitted delegation, but it is internally split and may ride off in two directions.

That's 256 votes all together—the balance of power in the convention.

One more tip to keep in mind:

One of the best times to engineer a deal is during a recess. So, if there's a recess between the ballots at Philadelphia, be ready for important vote shifts on the first roll call after the delegates reconvene.

THE TOUCH-AND-GO SCRAP over a new steam power plant for TVA dramatizes a turning point in the long expansion of public power.

True, there is more federal money this year for power agencies than ever before—about \$1½-billion. But the public-power activities that compete with private utilities already are being curbed by Congress. And from here on, the public-power crowd will be on the defensive.

Hydro generation isn't the issue—not so long as there is an obvious demand for every kilowatt that can be installed. And no one seriously challenges the established policy of federal development of water resources.

Congress is balking at projects that go beyond hydro generation—power transmission and steam generating plants. These have been the objectives of the public-power drive for the last decade—and

until this year public transmission lines, at least, have been reaching out.

This time, Congress has cut back a score of transmission projects. Next year, it may go so far as to require bus-bar sale of power at new federal projects. Federal power agencies then will be fighting hard just to keep the transmission lines they now have.

Congress is making sure, at the same time, that the federal agencies don't resist too zealously.

Example: this week's legislative ouster of Reclamation Commissioner Mike Straus, long-time crusader for public power. The Interior Dept. appropriation bill says Reclamation's boss must be an engineer; Straus isn't.

TRUMAN IS BEING URGED to name a labor union man to succeed Schwollenbach as Secretary of Labor.

It might help politically—if he could find someone willing to take it who is acceptable to both C.I.O. and A.F.L.

Names we've heard mentioned: railroader A. F. Whitney, who is friends with Truman now; Clint Golden of C.I.O., now with ECA; former Under Secretary of Labor Dan Tracy, of A.F.L.; and Harvey Brown, of the independent machinists' union.

There's also talk of Keen Johnson, another former Under Secretary and ex-governor of border-state Kentucky. Former Sen. Mead, a natural candidate for the job, is blackballed at the White House these days; he's been complaining too loudly that Truman hasn't found him a good job before this.

Meanwhile, the Labor Dept. is being run by C.I.O.'s John Gigson, assistant secretary.

• Civilians won a victory in Washington, for once, on design of airline planes. Legislation authorizing federal development of new airliners (BW-May 29'48,p16) gives civilian agencies majority vote on the interdepartment board to run the program. Symington wanted to run this show, to insure that new passenger planes would be convertible to military freight. . . .

• The Oak Ridge atom wage settlement this week saved Congress from having to add one more to its last-minute chores: figuring out what to do when the Taft-Hartley 80-day injunction period runs out (BW-May 15'48,p15).

Indexes of Man-Hour Output (1939=100)

	Anthracite Mining	Soft Coal Mining	Iron Mining	Railroads	Electric Lgt. & Pwr.	Agriculture (Output per Worker)
1935	79.3	82.4	87.7	87.6	82.5	87.5
1936	86.2	86.3	98.8	93.5	87.8	81.6
1937	87.4	88.1	105.9	95.2	89.6	105.3
1938	97.9	92.9	70.2	94.7	89.0	97.8
1939	100.0	100.0	100.0	100.0	100.0	100.0
1940	98.5	104.0	117.4	105.2	108.6	103.5
1941	100.5	104.4	117.3	115.5	123.2	107.5
1942	92.1	102.9	107.8	139.6	145.8	118.9
1943	87.5	98.7	96.9	150.9	182.7	116.7
1944	92.0	102.5	99.7	148.1	191.1	123.6
1945	89.2	105.7	110.5	139.5	182.5	120.7
1946	93.5	114.2	104.9	129.1	160.7	122.2
1947	89.1	120.8	107.5	135.0	166.6	—

Productivity Picks Up

The war-bred curse of inefficiency shows signs of lifting. Labor's man-hour output is now above prewar levels, even though the rate of increase still lags. Manufacturing is the weak spot.

For the past year or so employers in various industries have had the feeling that the productivity of labor was increasing smartly. Comparing notes with each other, they gathered that this up-trend was fairly general—except for manufacturing, which has lagged. And by this week they could see that a sizable body of evidence had piled up to confirm their impression.

For instance, in a survey just completed by the National Industrial Conference Board, two-thirds of the companies reported that physical output per man-hour was larger than a year ago. Only 10% reported a decline in productivity.

• **Encouraging Evidence**—Thomas J. Watson, president of International Business Machines Corp., recently told his stockholders: "Man-hours per unit are slightly lower than before the war, and quality of work is the highest in the history of the business."

And in Washington this week a generally cheerful view prevailed in a meeting of the Productivity Conference—an organization of government and private economists which serves as an informal advisory group to the Bureau of Labor Statistics.

BLS has the job of trying to measure changes in productivity. The conference was formed two years ago to help repair the breakdown of produc-

tivity measurements that resulted from the rapid wartime shifts.

• **Historical Trend**—For some 20 years before the beginning of the war there was a long-term increase of about 1.9% a year in nonagricultural labor productivity. This ended in 1940. During the war and the immediate postwar years, the U. S. was more interested in high-level production than efficient utilization of labor. The increase in productivity in these years was only something like half of "normal."

As a result, productivity in general is still well below the level of the prewar trend line. The volume of goods and services per worker is only about 5% greater than in 1941. Had productivity increased the way it did before the war, individual output would be more than 10% greater than in 1941.

• **Back in the Groove**—Last year, however, there appeared a sharp upward turn in over-all efficiency of labor utilization. It looks as if industry may be starting to catch up with the long-term trend.

Behind this picture of over-all productivity are a number of marked shifts in particular parts of the economy.

In the extractive industries—agriculture and mining—productivity rose rather sharply during the war. These were areas in the economy which were just feeling the effects of broad mech-

anization when World War II began.

• **Agriculture and Coal**—For instance, labor productivity in agriculture, which had risen about 25% in the 20 years before 1939, shot up some 22% between 1939 and 1946. Perhaps a quarter of this gain was due to unusually good weather, but most of it can be attributed to a 40% increase in mechanization, more effective fertilizer in larger quantities, and better seeds.

Similarly, a 20% increase in bituminous coal output per man-day since 1940 partly reflects longer hours. But it is also the result of an increase of more than 60% in mechanical loading underground, plus the fact that the proportion of strip mining more than doubled in this period.

• **Railroads and Utilities**—Another area where productivity has been increasing during the 1940's is in utilities such as electric power and railroading. Factors here have been steadier utilization of equipment plus more efficient use of the product by consumers. More effective loading of freight cars and the use of more electricity per consumer are examples of these factors.

Thus, railroad revenue traffic per man-hour rose 50% between 1939 and the war peak. It has since fallen off somewhat, but in 1947 it was still 35% ahead of 1939.

Electricity output per man-hour had been rising about 8% a year through the 1930's. Between 1939 and 1944 it nearly doubled, and it is still 67% ahead of prewar experience.

• **Manufacturing Lags**—From what evidence there is, the weak spot in labor-use is manufacturing. There are no reliable measurements of the over-all trend in manufacturing productivity during the war and postwar years. However, productivity of the economy as a whole, as gaged by the Gross National Product, has shown only slight gains, while most of the nonmanufacturing areas have gained sharply. So manufacturing seems to be the laggard.

A likely reason for this is the high level of demand all through the 1940's. This has lessened the incentives for economical use of labor. It has also meant that much new capacity has been used to increase total output rather than to replace inefficient machinery.

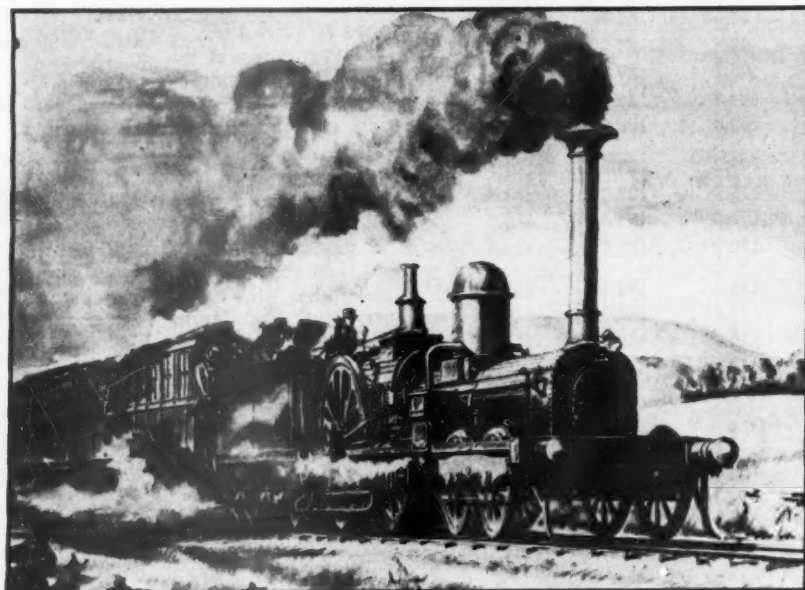
Productivity data have been collected on a few individual manufacturing industries, but they are too scattered to prove much. No very good information is expected until the completion of this year's Census of Manufactures.

• **Unclear Picture**—What data there are seem to show that in many soft goods

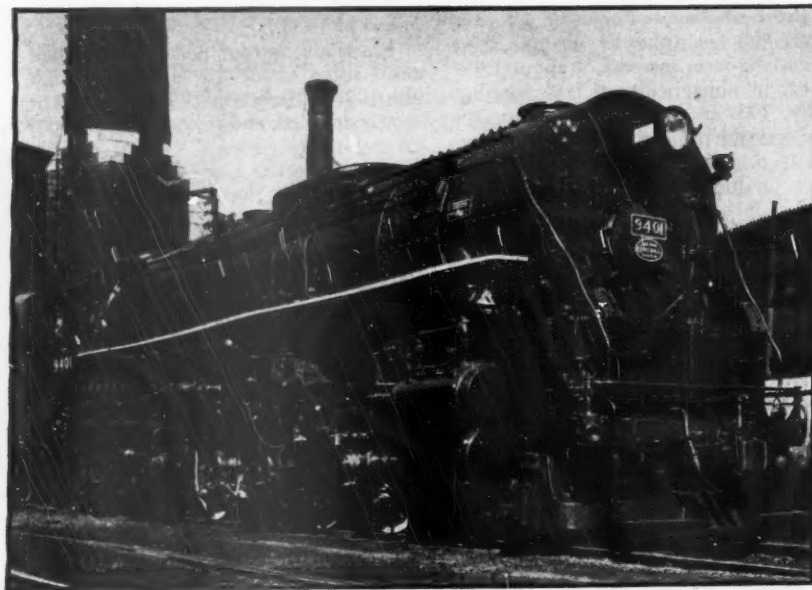
lines productivity dropped steadily during the war and has partially or wholly recovered since. There are exceptions to this. In the men's shirt industry productivity has been rising steadily, perhaps due to standardization. And output of synthetic fibers per man-hour has nearly doubled.

The situation in hard goods is even

more confused. One common pattern seems to be a wartime increase in productivity with a postwar decline. There seems also to be a trend toward a smaller requirement for direct labor, counterbalanced by an increase in indirect. This might indicate a movement toward more sophisticated managerial planning and scheduling.



Alco's First Steam Locomotive, The 'Lightning'...



... And its Last, 100 Years Later

After a century of making steam locomotives, American Locomotive Co. has rolled out its last iron horse. "American Locomotive is not intentionally going out of the steam locomotive business," said vice-president P. T. Egbert. "It's simply a matter of

demand." From now on Alco will concentrate strictly on diesel electrics. At the Schenectady (N. Y.) plant the changeover was scarcely noted. Nearly all of the company's 6,500 workers had been gradually shifted to diesel-electric assembly lines.

Washington Acts

Congress kills broader social security, exempts salesmen. Supreme Court upholds renegotiation, VA insurance.

Congress and the Supreme Court—driving for summer recess—tied up several loose ends this week. These included: social security exemption of salesmen; veterans' insurance; contract renegotiation.

• **Social Security**—Congress decided that salesmen, door-to-door solicitors, artists, writers, entertainers won't be brought under social security this year (BW—Dec. 20 '47, p. 88). A recent Treasury ruling would have extended coverage to this category (500,000 to 750,000). Before that, they were not considered "employees" under the law. Then Rep. Bertrand W. Gearhart (R., Calif.) introduced a resolution to keep these workers off social security lists. The measure got by the House and Senate, but was vetoed by President Truman.

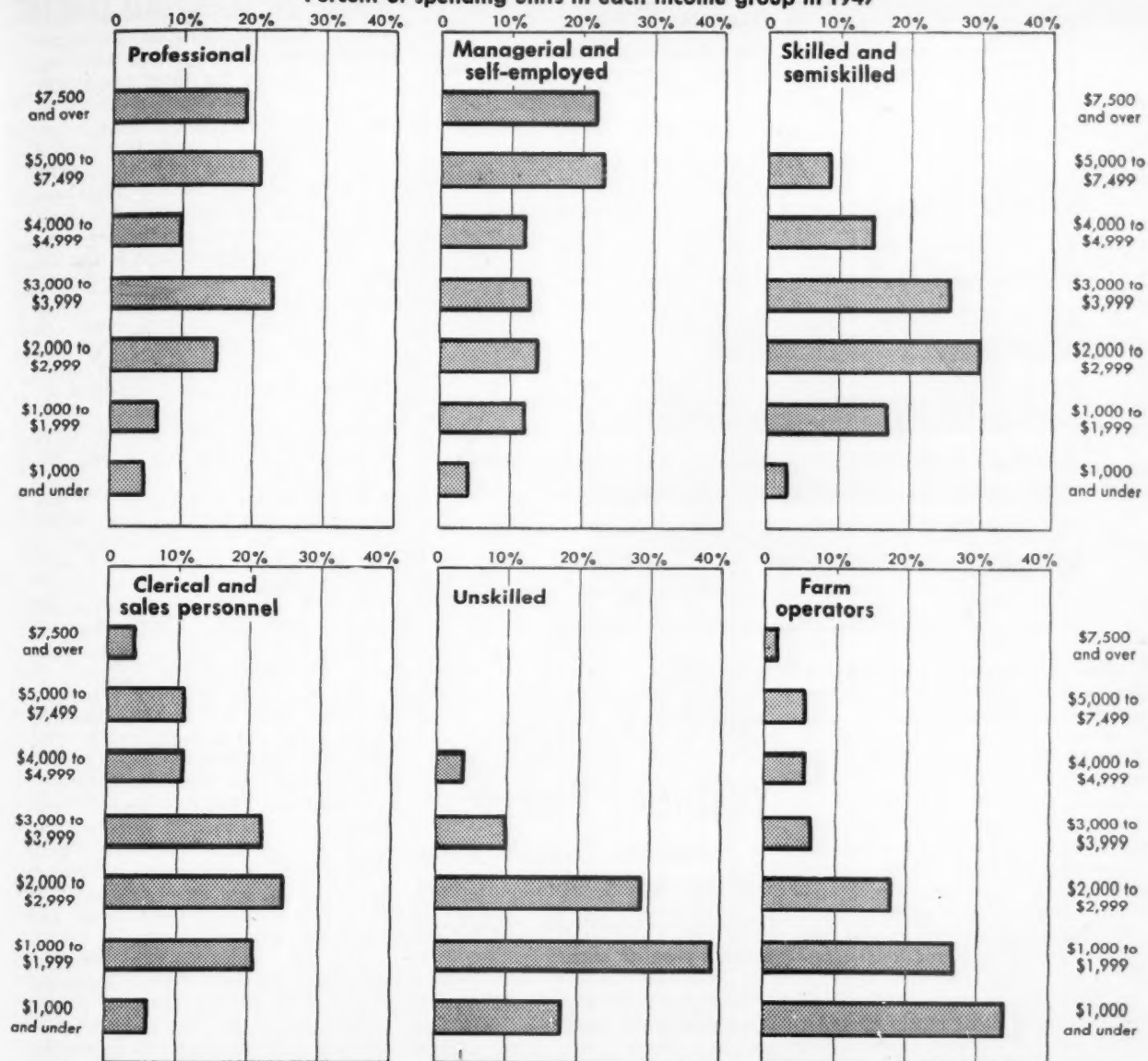
Congress overrode the President's veto this week, 297-to-75. This doesn't mean that the group will be kept permanently outside the social security pale. Senate Finance chairman Eugene D. Milliken (R., Colo.) wants coverage extended to all workers; he predicts the next session of Congress will take it up.

• **Veterans' Insurance**—The Supreme Court tossed out the claim of beneficiary Tillie Zazove, for an ultra-liberal interpretation of a National Service Life Insurance policy clause (BW—Dec. 13 '47, p. 20). Had her claim been upheld, the government might have had to pay out some \$97-billion on policies instead of \$35-billion. That would have slammed the door on any dividend payments (BW—May 15 '48, p. 52), threatened the future of many a private insurance company. Now the Veterans Administration can go ahead figuring on paying out an estimated \$1.5-billion to \$2-billion in dividends. But policyholders probably won't see their slice before July, 1949.

• **Renegotiation**—The Supreme Court unanimously approved the constitutionality of the renegotiation laws; under these, the government has recovered some \$3-billion in profits that otherwise would have gone to wartime contractors (BW—May 8 '48, p. 22).

Real significance of the Supreme Court's decision is that it gives the military services a free hand to apply renegotiation clauses to the new series of contract regulations now being drafted. It'll be months before the military can say how renegotiation will be administered, but they've started work on it.

Percent of spending units in each income group in 1947



Data: Federal Reserve Board.

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Consumer Incomes: How They Moved Up in '47

New Federal Reserve Board figures indicate that median income now is \$2,530; managerial group is on top.

Marketing men know that consumer incomes before taxes grew some \$20-billion in 1947. But they also know that it isn't total consumer income alone that determines the demand for a product. The question that counts from the businessman's viewpoint is: "What happened to the income of my particular customers?"

• **Breakdowns**—This week the Federal Reserve Board got out a batch of figures that will help sellers form a better idea of who their customers are and how much they earn.

According to this survey, about 24-

million spending units, roughly half the total, increased their money incomes in 1947. (It's worth noting, though, that only 29% said that they considered themselves "better off" than they were a year before.) Only 9-million spending units had lower incomes in 1947 than they had in 1946.

The chart above shows how the various occupational groups stacked up on the basis of 1947 incomes. In general, the managerial and self-employed had the highest incomes. Median income for this group was \$4,500. (The median is the middle unit in a ranking; half

the group is below it, half above.) About 22% earned over \$7,500.

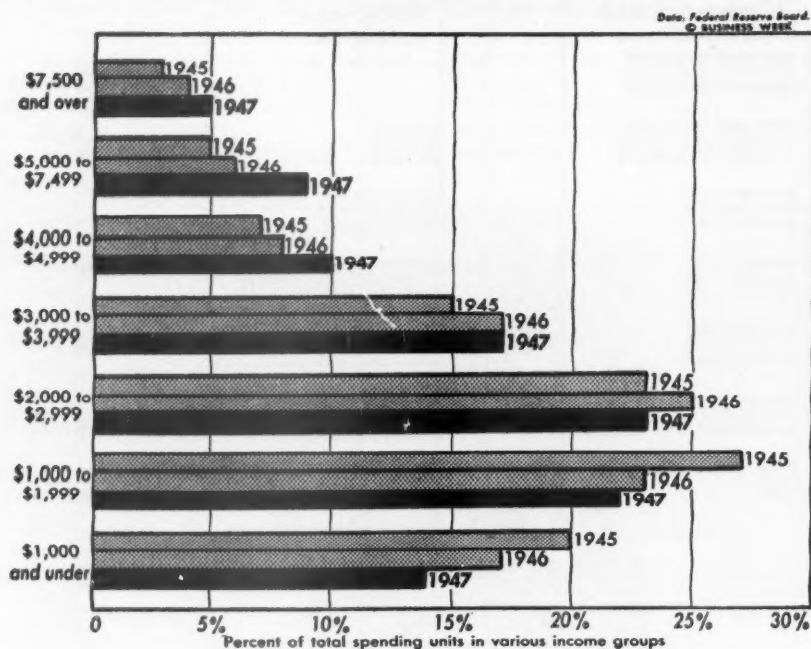
Professional workers were next to the top. The median income for them was \$4,000. About 19% were in the \$7,500 and over bracket.

• **Farmers Lowest**—Farmers came at the bottom of the scale. Their median was \$1,500. But the comparison here is not entirely accurate. The survey measured only cash incomes. And farmers take a good part of their living off the land without turning it into money first.

Additions to income in 1947 were spread fairly evenly through all income groups. Thus, there was no significant change in income distribution.

• **Proportions**—The highest tenth of the spending units (ranked according to size

Consumers Climb Up the Income Scale



of income) got about 33% of total consumer income. This was about the same proportion as in 1946.

The next highest tenth got about 15% of the total; the next tenth 12%. The bottom tenth took about 1%, which was also its share in 1946.

• **To Higher Brackets**—But the rise of incomes did bring a general movement of spending units into higher income brackets. The chart above shows how the percentage of total spending units in various income brackets has changed in the three years covered by the survey.

In 1945, for example, 20% of all spending units had incomes under \$1,000, and only 3% were in the \$7,500 and over bracket. By 1947, the number under \$1,000 was down to 14%, and those over \$7,500 were up to 5% of the total.

The median income for all spending units was \$2,020 in 1945. That is, half the spending units had less than that; half had more. In 1947, the median had gone up to \$2,530.

• **Method**—The income survey is the second installment of the board's third annual survey of consumer finances (BW—Jun. 5 '48, p. 23). It was handled by Rensis Likert's Survey Research Center at the University of Michigan. Raw material for the findings came from some 3,500 interviews with cross sections of the nation's spending units. (A spending unit is defined as a group of people who live under one roof and share their incomes for major expenses.)

This sample is big enough to give reliable results on the major points covered. It is less trustworthy on the

breakdowns. But since the previous surveys were handled on a comparable basis, the findings for one year can be used to cross check the others.

Younger Blends

Distillers Corp.-Seagrams reduces aged whisky in two brands. Competitors watch, as industry sales slide.

During and just after World War II, Americans drank more liquor than they ever had before. Consumption reached a peak in early 1946. Since that time many a whisky-maker has cast an envious eye at Distillers Corp.-Seagrams, Ltd.; its sales have continued to rise while the industry trend has been down.

But nowadays an admirable sales record can have its drawbacks. Seagrams is reported to have only a limited supply of aged whisky (four-year-old or better). And sales are eating up this stock fast. Last month Seagrams was reported to be dickering for \$40-million of aged whisky from Publicker Industries, Inc. (BW—May 15 '48, p. 49).

• **Conservation Measure**—Last week Seagrams tackled its problem another way: It cut the quantities of aged whisky going into two of its secondary brands—Carstairs White Seal and Gallagher & Burton's—and replaced it with three-year-old whisky—at no cut in price.

The liquor trade is watching the move with interest. If it succeeds, other distillers might follow suit. Seagrams is

not the only distiller short of aged whisky. Wartime regulations almost entirely cut out production of drinking alcohol. Except for three one-month "holidays," distillers were restricted to war output.

This diversion of production created a gap in the sequence of whiskies aging in warehouses. Since then distillers have been struggling to make their dwindling stocks of prewar and wartime "holiday" whiskies last long enough to bridge the gap until 1944 and 1945 production comes of age.

A few smaller distillers, caught in the squeeze, have resorted to younger whiskies in their blends. The major distillers, however, have hesitated to make the change. Seagrams, which holds the largest share of the retail liquor market, is the first of the "Big Five" to take the step.

• **New Formulas**—The Carstairs White Seal bottle now carries a label which states that the "straight whiskies in this product are three or more years old." It used to say "five or more." The old formula: 5% six-year-old whisky, 23% five-year old. The new formula: 8% six-year-old, 5% four-year-old, 15% three-year-old.

The Gallagher & Burton's formula formerly called for 12% five-year-old whisky, and 15% four-year-old. The new formula: 7% six-year-old, 5% four-year-old, and 15% three-year-old.

• **Competitors React**—Seagrams' competitors lost no time in spreading the word through the trade. And they pushed their own four-year-old blends to wholesalers and retailers in an effort to capture a share of the Carstairs and Gallagher & Burton's market.

The trade views Seagrams' move as an experiment to see how consumers would react to the changed blends. Some observers feel that Seagrams took the step as an alternative to closing the deal with Publicker.

If sales of new blends with the younger whiskies go well, the squeeze on Seagrams' stocks of older whiskies will be eased.

• **Radical**—The industry looks on the experiment as a radical one to be timed when competition between brands is stiffening and liquor sales are falling off.

First-quarter bottling this year was down 24% from 1947. "Apparent" consumption of distilled spirits during the first quarter of 1948 declined 9% from the year before, and were 34% below the 1946 peak first quarter.

Standard & Poor's Corp. points out that these "apparent" figures are not altogether reliable, because they reflect the influence of inventories in license states and somewhat in monopoly states. Informal trade reports, however, indicate that retailers and wholesalers worked their inventories down generally during May.

Shaping the G. O. P. Platform

Committee Chairman Lodge aims at a brief and pointed set of principles; he will have to accept some generalities that compromise issues. Real platform has been written in Congress.

The young and energetic Sen. Henry Cabot Lodge of Massachusetts has one of the toughest jobs in Philadelphia next week—hammering together a platform that the whole Republican Party can stand on.

• **Brevity Wanted**—Lodge is chairman of the Resolutions Committee for the G.O.P. national convention. He sees his job this way: to give the Republican ticket a sharp set of principles that fit the platform of a winner. He wants the G.O.P. to quit using its planks to spank the New Deal. Instead of the 27 planks and 4,000 words of the 1944 platform, Lodge wants five planks broadly covering domestic and international problems. He wants it said in about 1,500 words—a platform short enough to be printed in full in even the smallest newspapers.

Lodge knows it won't turn out exactly that way. Differences within the party are too great to avoid many generalities designed to keep both sides of various issues happy.

• **Basic Pledges**—But, cutting through the verbiage, you can come up with this week end with about the following basic pledges:

Taxes and spending. First off, the G.O.P. can point with pride at the \$4.8-billion tax cut enacted over Truman's veto. But little more can be promised the individual income taxpayer soon. The pledge will be something like this: We must make sure that the budget stays balanced. There can be no return to deficits. When taxes can be cut again, excises are first on the list. Until it is certain that government revenue will pay expenses, business must be content with moderate tax revision next year.

Any promise to cut government expenses must be qualified. Except in national defense and foreign aid—and not even here if Dewey or Vandenberg is nominated—there is little room for budget pruning. In two years, the G.O.P.-controlled Congress has made little if any dent in Truman's budget. The platform pledge: We'll run government more efficiently and cheaper.

Labor. Again the platform turns to Congress for its plank: the Taft-Hartley act. Any pledge of further revision of the act must be in the broadest of terms, for here again the party is divided. A safer out is the promise of higher minimum wages, broadened social security, and some means of health and educational help.



HEAD CARPENTER for Republican platform is Sen. Henry Cabot Lodge

Foreign policy and national defense. The Marshall Plan and the draft, supported by Republican leaders, give the convention this plank. It takes some behind-the-scenes fighting on both ECA and the draft, though, to find just the language that will please the most people.

Economic policy. The G.O.P. stands on its record of removing controls, promising a friendly Republican atmosphere for business. Encouraging words to small business—such as a promise of special consideration on taxes—were insured when Lodge specifically assigned a subcommittee to whip up language on that subject.

Agriculture. Here again the resolutions committee cuts a plank from the Congress record—continued guarantee of price supports to farmers as provided in extension of the wartime program for another year. Western reclamation states—for which the 80th Congress has provided generously—can be sure of continued funds.

Government. Lodge is co-author of the law that set up the Hoover commission on reorganization of the executive branch of the government. This assures a platform promise to follow up

Hoover's recommendations, due next January.

• **Lobbyists**—Last week, Lodge began the noisy chore of listening to lobbyists begging for a paragraph—even a word or two—in the platform.

He bluntly told the spokesmen of 50-odd organizations received in two days of hearings that they would get five minutes or so to state their case—and not to expect the 1948 platform to be weighed down by pet proposals.

• **Sectional View Points**—But the platform committee itself is composed of two delegates from each of the states and territories; they consider their own sectional problems—civil rights, tariffs, etc.—just as important, if not so glamorous, as national defense or foreign policy.

So, the tough job of cutting the heap of proposed planks to final language went to a small group, controlled by Lodge and six other senators—Eugene Millikin of Colorado; Irving Ives of New York; Raymond Baldwin of Connecticut; E. H. Moore of Oklahoma; and Wayland Brooks of Illinois.

• **The Real Platform**—Despite the pressures these men must meet, Republicans recognize that they have been writing their real platform in Congress since the 1946 election. It's their record, for better or for worse, and Lodge's platform must of necessity reflect it.

G. E. INCREASES PRICES

Last week General Electric Co. took a new look at its no-wage-raise policy and hiked hourly pay 8%. This week it forsook its drive for price cuts by boosting quotations on a variety of industrial and consumer products.

The price increases are selective. Some items ride along without change. On others, boosts ranging from 5% to 10% wipe out wholly or partly the two major price cuts made in January and April. In a few cases, the hikes are larger than the total of the two cuts.

On fractional horsepower motors, April's 5% cut was withdrawn; the January 5% cut stands. On switch gear and distribution transformers, April's cut was wiped out; there had been no January reduction here.

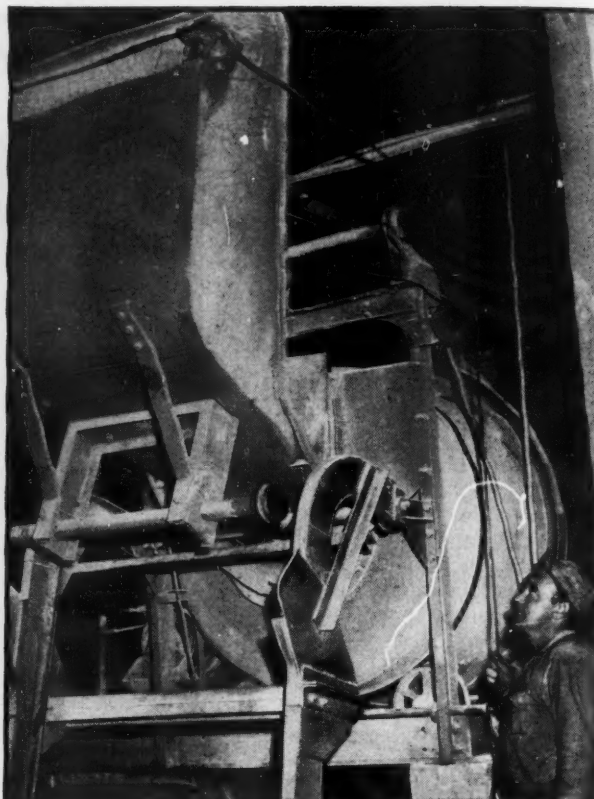
The situation in consumer goods is just as varied. Example: Radios are unchanged; television sets are boosted. Obviously, the decisions were made with an eye on the demand situation.

G. E. says the changes are geared right to annual increases of \$50-million in its direct labor bill, and \$22-million in effects of 1948 wage boosts on materials, components, and freight. It adds what may be a warning of more increases to come: These boosts take no account of what may be done soon on wages and prices by other suppliers—particularly steelmen.

How Akro Agate Co. Makes Its Marbles . . .



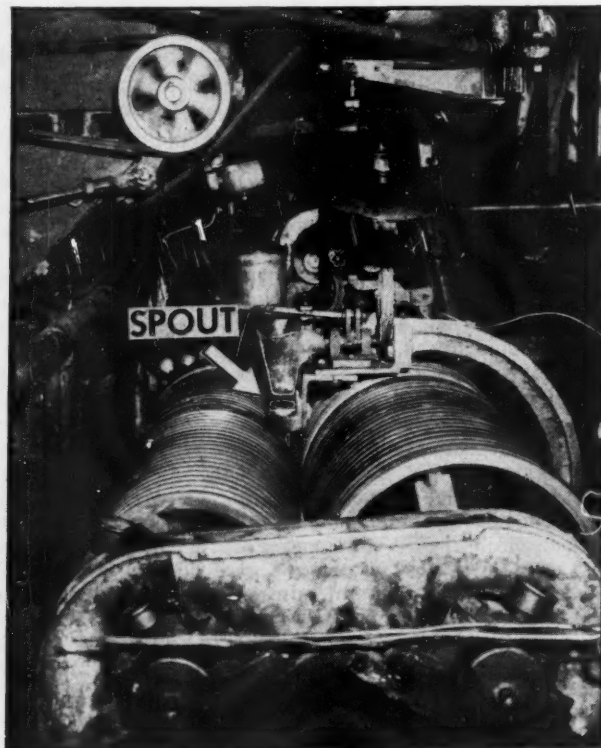
1 First step in marble making is preparing basic glass. Here, workman loads wheelbarrow with sand, one ingredient



2 Sand (silica), soda ash, and feldspar, three things that go into glass are mixed in this machine, then melted in a furnace



3 Actual marble making starts with second furnace process. Here raw glass is remelted and strips of coloring are added



4 Molten glass, dropped from spout, pours into grooves of these counter-rotating cylinders. This shapes glass into spheres



5 Marbles, still hot, are ejected along this rotating screw arm into buckets. Workman checks them for size with calipers



6 Marbles are graded according to size by this simple grading device. They then drop into buckets ready for shipment

Marbles Roll into New Industrial Uses

A dwindling demand from the youth of America, and dollar shortages abroad, have sent marble makers scurrying for new markets. The result is that industry is now pocketing many of the marbles that once jangled in the trousers of small fry.

Last week Akro Agate Co. of Clarksburg, W. Va., one of the biggest marble makers in the U. S., put the situation this way: "Last year 25% of our marble production went to industrial users. Now we're trying to work with industries to increase this ratio by making more perfect glass spheres." What Akro, and other marble makers are up against, is to cut spherical tolerances to not more than 3/1000 in. Right now, marbles are only accurate to between 4/1000 in. and 7/1000 in.

• **Metal Shortages Helped**—War-born metal shortages gave marbles their first boost into industry—as a substitute for steel bearings. Today marbles are used in a variety of products.

Road-sign manufacturers use them as "cat's eye" reflectors. Lithographers use them in making printing plates (the marbles are rolled back and forth over the copper plates to get the desired smooth finish). Ford Motor Co. recently

gave Akro a big order; it wanted the marbles for visual training devices.

Owens-Corning Fiberglas Corp. uses marbles to supply the charge of glass for its fibrous-glass furnaces. The reasons: (1) It's easy to check the quality of the glass when it's in marble form; (2) the marble feed into the furnace can be controlled accurately. Owens-Corning used to buy its marbles from Akro, but it uses so many that it went into the marble-making business itself.

• **Even Bossie Benefits**—One company has found that marbles are useful in helping cows to give more milk. Nox-Trol Products Co., Stockton, Calif., uses marbles in its Nox-Trol Applicator. This is a plastic device used to apply a soothing salve to the weary faucets of dairy cattle. Two marbles are used in each applicator as check valves. Since they are glass, they resist chemical changes better than steel balls.

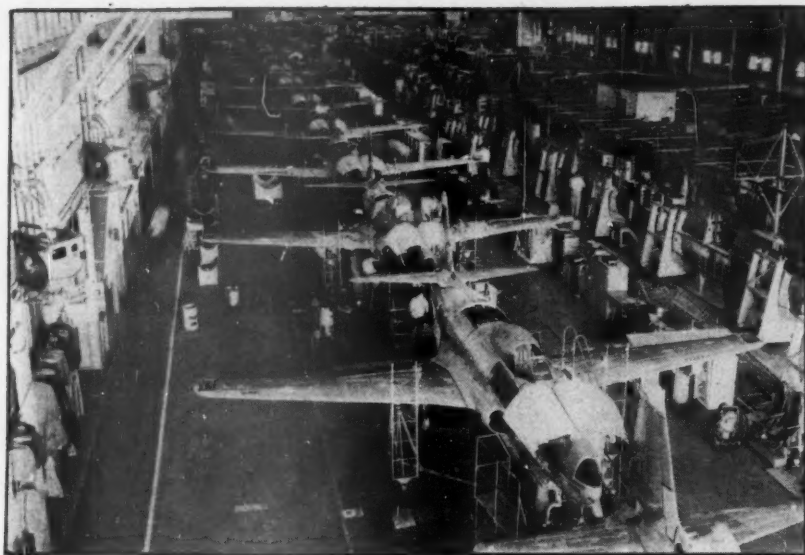
Another company finds marbles useful in reconditioning oil and gas wells. Burch Agate Torpedo Co., Borger Tex., has perfected a way of shooting marbles through old oilwell holes to clean and ream them out for further use.

• **Bigger Potential**—But even with the increased demand from industry, Akro

isn't turning out as many marbles as it could. The company's Clarksburg plant has nine large marble-making machines on its lines. Only one is operating—and that on just one shift, which can turn out 240,000 units. The rest of the plant's capacity concentrates on turning out such things as novelty glassware and kiddies' tea sets.

Akro's plant was located in Clarksburg in 1914. The site was chosen mainly because it was near fuel and basic raw material sources—feldspar, soda ash, and silica. Akro officials estimate that their company turns out about 25% to 33% of all marbles made in the U. S. West Virginia itself is the center of the marble-making industry, turning out about 75% of the world's output.

Last year, according to Dennis Beasley, plant manager: "Our export trade took 50% of production. This year it's down 50% because of the dollar shortage." Right now about the biggest customers for playing marbles are manufacturers of Chinese checkers games. But as long as the young ones demand them, the company will turn out fancy agates for the spring knuckling-down, too.



ASSEMBLY LINE for P-80 jet fighter planes at Lockheed Aircraft Corp.'s Burbank (Calif.) plant will be kept busy until mid-1950 now that Lockheed has a new Air Force contract

Aircraft Industry Rescued

Navy and Air Force allocate almost \$2-billion of funds for fiscal 1949 to 12 plane builders. Action came just in time: Some companies were facing shutdowns; now they foresee profits instead.

The aircraft-manufacturing industry is on its way out of the red ink for the first time since the end of the war. Reason: Big military orders placed last week by the Navy and the Air Force.

• **End of the Rope**—Many aircraft suppliers had been threatened with complete shutdown by the end of this summer. Existing contracts were running out, and no new ones were in sight until fall—when procurement funds for the new fiscal year are traditionally allocated.

That's why Congress separated aircraft procurement funds from the regular military appropriation bills, and rushed them through. And that's why Defense Secretary James Forrestal made \$1,998,800,000 of fiscal 1949 money available even before the end (on June 30) of fiscal 1948.

• **Who Got Orders**—The money is being used to buy 3,366 planes. The Air Force is getting 2,201; the Navy 1,165. The orders are split among 12 planemakers:

North American Aviation, Inc., of Inglewood, Calif.: 451 F-86 swept-wing jet fighters, 266 T-28 training planes, and 51 B-45 four-jet bombers, all for the Air Force.

Douglas Aircraft Co. of Santa Monica, Calif.: 356 AD-2 piston-engine attack planes and 28 F3D twin-jet night fighters for the Navy; 28 giant C-124 four-engine transports for the Air Force.

Grumman Aircraft Engineering Corp.

of Bethpage, Long Island: 317 F9F jet fighters and 23 AF-1 piston-engine search planes for the Navy; 38 twin-engine Albatross amphibians for air-sea rescue work, to be split between the Navy (14) and the Air Force (24).

Lockheed Aircraft Corp. of Burbank, Calif.: 457 P-80C Shooting Star jet fighters (picture, above) and 128 two-seater jet trainers modeled on the P-80C for the Air Force; 82 P2V piston-engine patrol bombers for the Navy.

Boeing Airplane Co. of Seattle and Wichita, Kan.: 162 four-engine B-50 bombers (successor to Boeing's B-29 as the standard Air Force heavy bomber).

Northrop Aircraft, Inc., of Hawthorne, Calif.: 30 giant B-49 eight-jet Flying Wing bombers for the Air Force.

Republic Aviation Corp. of Farmingdale, Long Island: 409 P-84 Thunder-jet fighters for the Air Force.

Curtiss-Wright Corp. of Columbus, Ohio: 88 F-87 twin-jet fighters for the Air Force.

Fairchild Engine & Airplane Corp. of Hagerstown, Md.: 107 C-119 twin-engine Packet transports for the Air Force.

McDonnell Aircraft Corp. of St. Louis: 179 F2H twin-jet Banshee fighters for the Navy.

Glenn L. Martin Co. of Baltimore: 47 AM-1 Mauler piston-engine attack planes for the Navy.

United Aircraft Corp.: The Chance Vought Division, Stratford, Conn., and

Dallas—33 F6U Pirate jet fighters and 19 radically designed, tailless F7U twin-jet fighters with rocket auxiliary boost power for the Navy. Sikorsky Division, Bridgeport, Conn.—37 helicopters for the Navy.

The Navy still has funds for 30 planes for which manufacturers have not yet been picked.

• **Left Out**—Several major manufacturers are missing from the list. Among them: Bell Aircraft Corp., builder of the first supersonic plane, the XS-1; Consolidated Vultee Aircraft Corp.; and Ryan Aeronautical Co. Consolidated's existing contract for six-engine B-36 bombers, already cut from 100 to 95 planes, faces still further cuts.

Manufacturers who were left out, or who got only small prime contracts, can expect considerable subcontracting business. The Air Force has hinted broadly that this is necessary to keep a broad industry base in reserve for emergency needs; most prime contractors will take the hint.

FTC BROADENS ITS FIELD

The Federal Trade Commission has strayed off its reservation into the fields of regulating the prices charged for labor. So says the FTC's famed dissenter and gadfly, Lowell B. Mason.

In a 4-to-1 decision, the commission this week clamped down on the Master Engravers Guild and the Master Engravers Service Corp., Paterson, N. J., and 13 engraving companies. It ordered them to stop fixing the prices they charge for engraving designs on the copper rolls the textile industry uses to print designs on fabrics.

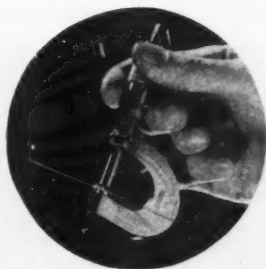
Said Commissioner Mason: "This is a labor case, and we ought to stay out of it. . . . The facts are, the respondents (engravers) never owned any etching to sell, any more than a ditchdigger working in a public street sells ditches."

Mason pointed out that the FTC back in 1937 had considered setting up a trade practice conference for the industry. At that time, it came to the conclusion that the FTC didn't have the authority to deal with labor and service pricing agreements. The evidence both then and now, said Mason, shows "beyond a reasonable doubt that the engravers followed a planned common course of action in establishing and maintaining prices for their services."

Commissioner Ewin L. Davis, writing for the majority, said it doesn't matter that the copper rolls themselves are owned by the textile converters, and that the engravers merely perform a service by transferring the desired design to the printing roller. "Interstate shipment of the rollers pursuant to contracts between printers and engravers constitutes interstate commerce," according to the majority.



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The wartime experience of Army and Navy radar engineers, with critical applications of fixed and adjustable radio resistors, proved the superlative quality of Allen-Bradley resistors. That they were unsurpassed for accuracy, stability, and performance is confirmed in their consistent use, today, by the leading radar and television equipment manufacturers.

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CITIES



WRIGHT FIELD, near Dayton, is headquarters for the Air Force's Materiel Command, along with nearby Patterson Field



NATIONAL CASH REGISTER CO. has recently completed a \$1-million plant addition, nearly doubled prewar employment

Dayton's Postwar Boom Gets into High Gear

Ohio city recovered quickly from slump at war's end. Thanks to \$125-million worth of expansion, it is now doing better than ever.

There was no doubt last week that Orville and Wilbur Wright's home town had a boom on. And a good chunk of Dayton, Ohio's, newfound postwar prosperity was due to an invention of the brothers—the airplane.

• **Action**—A couple of years ago, not even the most optimistic of Dayton's business leaders would have predicted what has happened. Right after World War II, the monthly average of industrial employment in the area sagged to

66,744. Its wartime peak had been 90,144. Cancellation of military orders poured in from right and left.

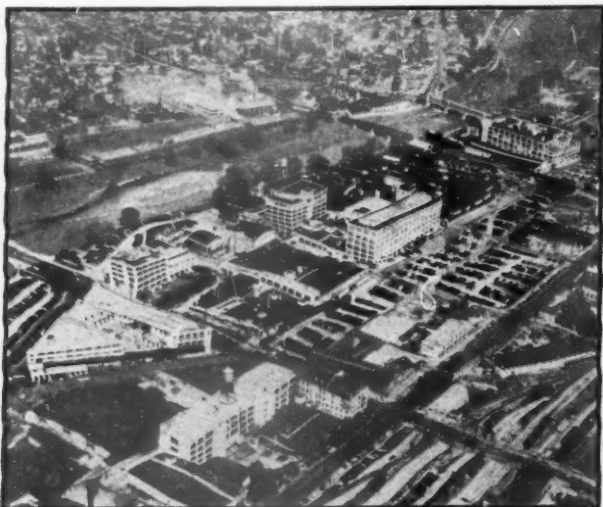
Hastily Dayton businessmen dusted off their postwar plans, decided the time to rettool had come. It sounded like whistling in the dark when they predicted the area would hit the 90,000 employment figure again within a year.

• **Underestimate**—As it turned out, they were being conservative—the 90,000 goal was reached within nine months.

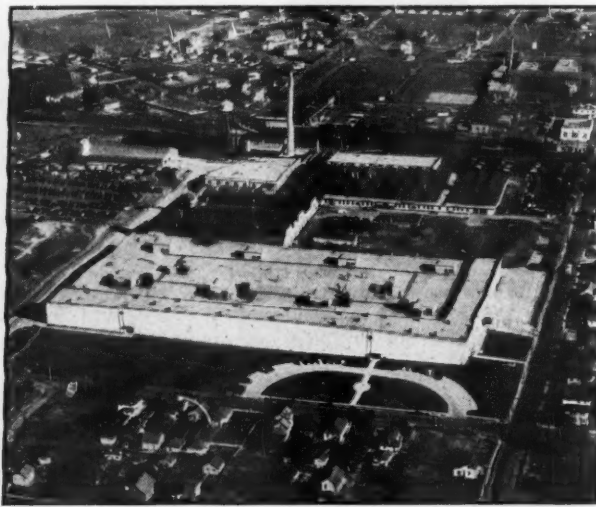
By last week, following \$125-million worth of postwar expansion, industrial employment stood well above the 100,000 mark. Chamber of commerce men think that unemployment now is only 1% or 2%, as against 10% in 1940. (Population of the Dayton area now is about 385,000; of the city, 245,000.)

From the signs of things, the prosperity is no flash in the pan. For example, manufacturers' agents were in full force, in town on the heels of the passage of the 70-group Air Force bill.

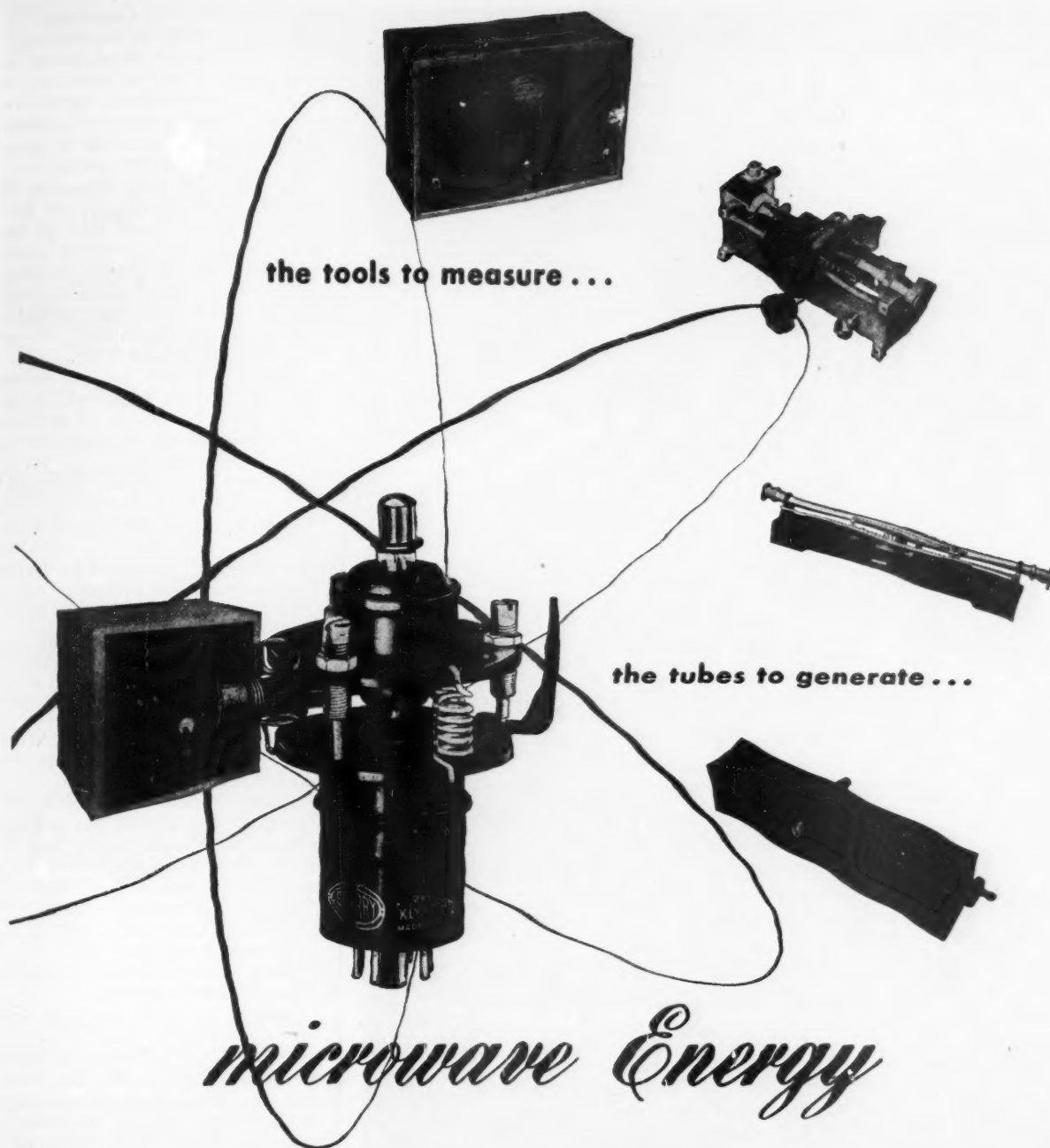
• **Aircraft**—Five miles from Dayton are Wright Field (picture, above left) and Patterson Field, headquarters for the



PLANT NO. 1 of the Frigidaire Division of General Motors, which has spent \$15-million for expansion since the war's end



CHRYSLER AIRTEMP'S new \$20-million plant turns out air-conditioning units and commercial refrigeration equipment



The Sperry Klystron Tube to generate ultra-high-frequency microwaves . . .

The Sperry Klystron Signal Source to "power" them . . .

The Sperry Microline to test and measure them . . .

These Sperry products equip the research or development engineer with every essential for development or design in the microwave field.

The Sperry Klystron Tube has already opened up new vistas in

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The Sperry Microline includes practically every type of instrument for quick precision measurements in the microwave frequency bands.

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The very best protection you can give your records is a new Mosler "A" label safe. Your business *deserves* it—and when you consider that it's the *future* of your business at stake, can you afford anything less?

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Air Force's Materiel Command. This group is in charge of engineering, research, experiments, development and procurement of aircraft parts and supplies. The manufacturers' agents were in town to seek government contracts. (Employment at the field is around 20,000 civilians, 2,000 military.)

But with all this prosperity the chamber of commerce men still had a problem: Where could they go from here? They want more industry, and still more expansion of present industries. But the labor market is already tight. And like most other cities today, Dayton has a housing shortage. It can't easily house the labor it has.

• **Housing**—Dayton's housing shortage doesn't come from a low building rate. In fact, the total value of residential construction in the metropolitan area for the past 17 years (1930 through 1947) was \$357 per capita. That is \$114 more per capita than the average of the 10 largest cities in the Fourth Federal Reserve District. Last year, 4,006 housing units were completed in Dayton. The total number of homes had increased from 83,963 in 1940 to 108,670 at the end of 1947.

Dayton's non-residential construction (factories, offices, etc.) for the 10-year period was equal to \$354 per capita—the highest of any of the 10 Fourth District cities. Dayton retail sales in 1947 were \$335-million, compared with \$275-million in 1946.

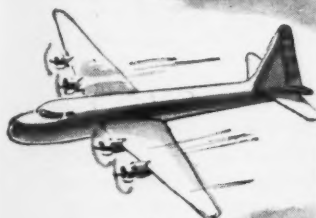
• **General Motors**—Biggest single factor behind all this growth and prosperity is General Motors Corp. It has spent nearly \$50-million in expansion in Dayton since the beginning of World War II. Total employment in its five Dayton divisions now stands at 39,781, compared with a war peak of 35,000. So G. M. is paying some 40% of the city's entire industrial payroll.

Most of the G. M. expansion dollars have gone into its Frigidaire Division (picture, page 28), where \$15-million has been spent since the war's end. A year ago, Frigidaire added home freezers and automatic washing machines, and expanded electric range production.

Refrigerator production has been boosted to about 5,000 units a day. The prewar maximum was 3,100 a day. Frigidaire employment is now 22,000 compared with a war peak of 16,600 and a prewar peak of 16,000. Its payroll runs to roughly \$250,000 a day.

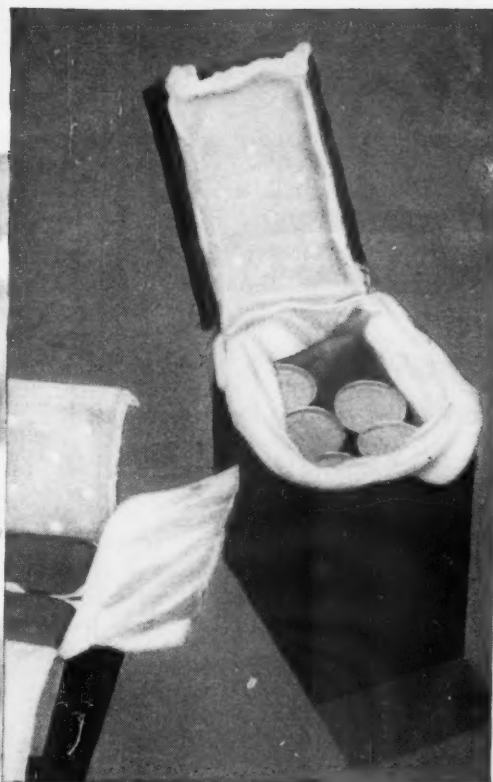
• **The Beginning**—Dayton has one of the biggest concentrations of G. M. production in the country. Its origin can be traced to Charles F. Kettering (picture, page 34), former G. M. vice-president in charge of research, and Edward A. Deeds, chairman of the board of the National Cash Register Co., another big Dayton industry.

In 1909 Kettering and Deeds formed the Dayton Engineering Laboratories



KIMPAK goes aloft

Hot meals for plane passengers are kept *hot*, snuggled inside clean, soft KIMPAK. Insulation Packaging. Photo through the Courtesy of United Air Lines.



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protects every product you ship

Wrap your products in strong, cushiony KIMPAK* creped wadding... and off they go to market—*safely*. For dependable KIMPAK clothes any product with complete protection—from shipping room to destination.

KIMPAK is soft, clean and good-looking—increases the eye-appeal of any package. It is pleasant to handle and economical. Feather-light and flexible, it adds little weight or bulk to shipments. Highly resilient, it with-

stands continuous shock and vibration without impairing its efficiency.

KIMPAK is made either liquid absorbent or liquid repellent. It is available in a variety of types, thicknesses and backings to suit your particular interior packaging needs. There is a specification of KIMPAK to meet every requirement of the Four Basic Methods of Interior Packaging—Surface Protection, Blocking and Bracing, Flotation Packaging and Absorbent Packaging.



Surface Protection—Water Heater
Photo Courtesy Hotpoint Inc.



Blocking and Bracing—Metal Window Frames. Photo Courtesy Flour City Ornamental Iron Company.

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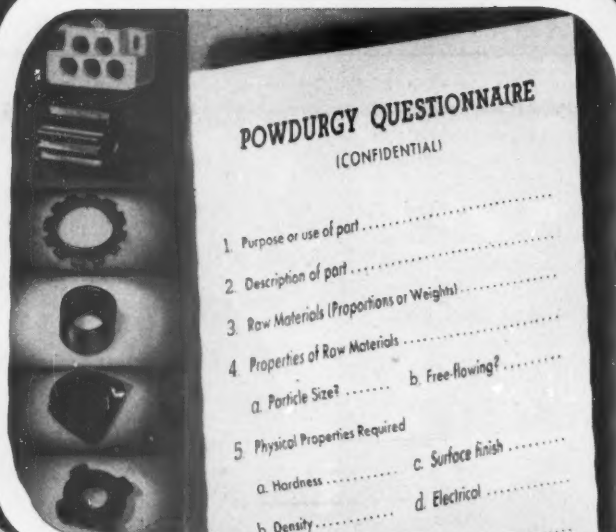
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Stokes also makes Plastic Molding Presses, Vacuum Pumps and Gages, Vacuum Processing Equipment, Pharmaceutical Equipment, Evaporators, Tube Fillers, Special Machinery.

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*Stokes' word for the theory and practice of making finished solid products from granular materials.

STOKES

KNOWS
HOW

Co., later to become famous under its initials, Delco. It developed the auto starter and perfected the famous Delco farm lighting systems.

Later G. M. took over the laboratories and the Delco name. The Frigidaire division came to Dayton because of Delco and Kettering's developments in refrigeration chemistry.

But further G. M. expansion in Dayton doesn't look likely for some time to come. Said a G. M. official: "I don't see how we can put much more here—not for awhile yet, anyhow."

• **Power Increase**—To meet the new demands for electricity brought on by the boom, the Dayton Power & Light Co. is building the first unit of a new \$15-million steam electric generating plant. It's located on the Great Miami, near Miamisburg, 10 miles south of Dayton. The station will have a total generating capacity of 300,000 kilowatts. The first 50,000-kilowatt unit is expected to be ready for operation sometime in July; the second unit by next spring. The company now has a maximum generating capacity of 216,000 kilowatts. In 1947, it bought 15% of its needed electricity from other utilities. The new plant will eliminate outside purchases.

In 1947, D. P. & L. built a \$500,000 propane gas mixing plant at Dayton to supplement the natural gas supply during extreme cold weather. Early this year it bought all outstanding securities of six electric utility companies and one gas utility company in the Greenville (O.) area, northwest of Dayton. The price was \$7,830,000. The companies absorbed were owned by the United Public Utilities Corp.

• **Atomic Energy**—On a mound across the river from D. P. & L.'s new Miamisburg power plant, the Atomic Energy Commission is constructing a new atomic research laboratory, to cost more than \$5-million. Expected to be completed in October, it will be operated as a division of the Monsanto Chemical Co.'s Central Research Department at Dayton. Director of the new lab will be Dr. Carroll A. Hochwalt, a vice-president of Monsanto, and also director of Monsanto's Central Research Department. (Monsanto has no factories in Ohio.)

As in the case of Kettering and G.M., Dr. Hochwalt is responsible for Monsanto research in Dayton. He and Dr. Charles A. Thomas, both connected with early G. M. research in Dayton, later founded the Thomas & Hochwalt laboratories. Monsanto, at first one of their clients, bought the laboratories and services of the scientists in 1936.

• **Monsanto Research**—The Central Research Department at Dayton has been expanded into a building bought from the War Assets Administration a year ago for \$800,000. Total employment at the Dayton laboratories and the new

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DEPEND on Youngstown's Buckeye Conduit for safety in electrical wiring. It is a standard-threaded, full-weight, rigid steel conduit of uniform, high quality. It provides the surest known protection against moisture, vapor, dust, crushing, vibration, and tampering by unauthorized persons.

Remember that this type of conduit is the only wiring system approved for hazardous locations by the National Electrical Code. So for Safety First, look for the underwriter's label bearing the name Youngstown on every length of conduit.

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Silicone Insulation Permits Continuous Operation of Grinders in Steel Mill



PHOTO, COURTESY CARNEGIE-ILLINOIS STEEL CORPORATION
Production per man-hour increased by silicone insulated motors able to sustain overloads in grinding steel slabs.

You generally buy increased production per man-hour by capital investment in new and improved machinery. It is possible now, however, to increase production and decrease unit costs at very little expense. By rewinding your motors with Dow Corning Silicone Insulation you can make your present machines work harder and more continuously.

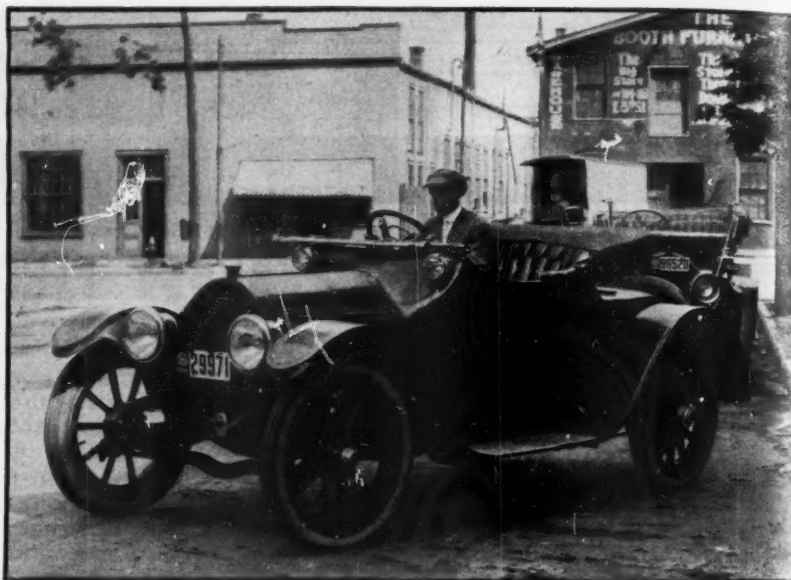
Here's an example. Manually operated swing grinders are used in the South Works of the Carnegie-Illinois Steel Corporation, Chicago, to remove surface defects from alloy steel slabs prior to rolling. Class "B" motors that were used to drive them failed frequently because of overloads. When overload relays were installed to protect the motors, production decreased because overheated motors cut out every 15 to 20 minutes forcing the operators to wait for the motors to cool.

Almost a year ago, two of these motors were rewound with Silicone Insulation and lubricated with DC 44 Silicone Grease. No overload relays were incorporated because this new class of electrical insulation will withstand temperatures 200°F. above Class "B" limits. Those motors have been working steadily ever since. Output is increased and the operators are enthusiastic because they also benefit by more continuous operation.

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CHARLES KETTERING, shown here in 1914 testing a car containing equipment developed by his Delco company in the city, is today regarded as the . . .

atomic lab will be 1,300 scientists by the end of the year, Hochwalt says. That's about double Monsanto's war peak.

The combined effect of the atomic lab and power plant construction jobs has sleepy little Miamisburg bursting at the seams. Population has jumped from 5,500 to nearly 7,000. To help meet the housing shortage, the Atomic Energy Commission last year set up a trailer city with 350 trailers and prefab dwellings (picture, page 36) moved from Oak Ridge, Tenn., projects. Many workers are living in Dayton, and some in Cincinnati, 40 miles south.

• **City Projects**—The people of Dayton, meanwhile, have their own expansion plans. After the war they voted a \$20-million program to eliminate grade crossings in the city and to build a new, combined city-and-county civic center. A new water-softening plant is in the blue-print stage.

But there is still an acute parking problem. It is made worse by laxity in enforcing parking regulations. A check-up last month showed that 50% of parking offenders were ignoring the tickets handed out by police. The big reason for this is the fact that the parking fine is only \$1. Follow-ups and arrests would cost more than they would be worth. So officials are considering increasing the fine.

• **Other Expansion**—Here are some other major plant expansion and employment increases:

Chrysler Airtemp Division of Chrysler Corp. has completed a \$20-million plant, started in November, 1945, (picture, page 28). It is devoted to air conditioning and commercial refrigeration equipment exclusively. Prewar, Airtemp built packaged air-conditioning units individually. Production capacity was



GODFATHER of Dayton's present prosperity, since he helped to lay its foundations

35 to 40 a day. Now it makes them on an assembly line in the new plant, and capacity is about 100 a day.

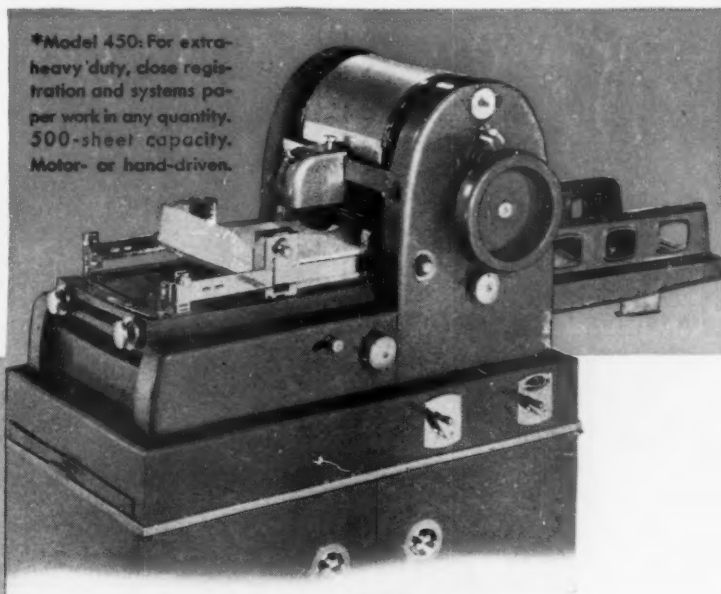
McCall Corp. has put in an \$11-million expansion of its printing facilities since the war. McCall is now printing 24 publications, including Readers' Digest, U. S. News, Newsweek, Popular Science, and McCall's own publications. Employment is 2,700, about 200 more than during the war period.

National Cash Register Co.: Employment is 14,500, compared with a prewar average of 8,000. Dollar volume of current sales is three times the immediate prewar figures. The company has recently completed a \$1-million plant addition of 150,000 sq. ft. (picture, page 28).

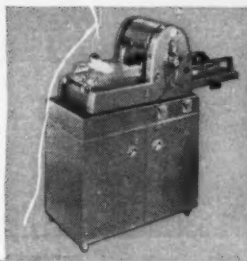
American Envelope Co. began op-

Roto-grip feed
Universal stencil clamp
Calibrated basic scales
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Lateral copy adjustment
Copy leveler control
Paper positioning control

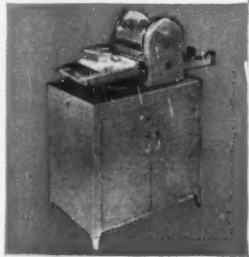
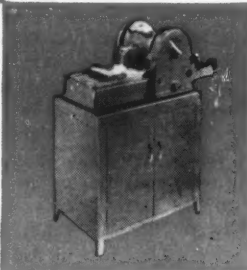
*Model 450: For extra-heavy duty, close registration and systems paper work in any quantity. 500-sheet capacity. Motor- or hand-driven.



*Model 440: For moderately heavy and fast short runs. Semi-automatic ink distribution. Capacity, 250 sheets. Motor- or hand-driven.



*Model 430: Similar to Model 420 but has convenience of semi-automatic inking and closed cylinder for smooth, quiet duplication. 125-sheet capacity. It is manually operated.

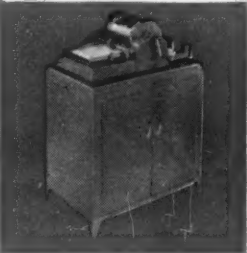


*Model 420: The lowest priced mimeograph with exclusive Flexamatic Control. Produces excellent color work. It has integral brush inking system, open cylinder. 125-sheet capacity. For manual operation.

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MIMEOGRAPHS

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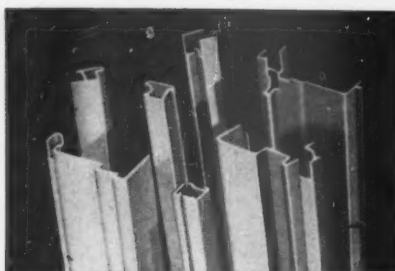
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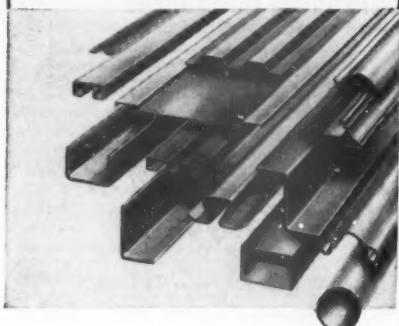
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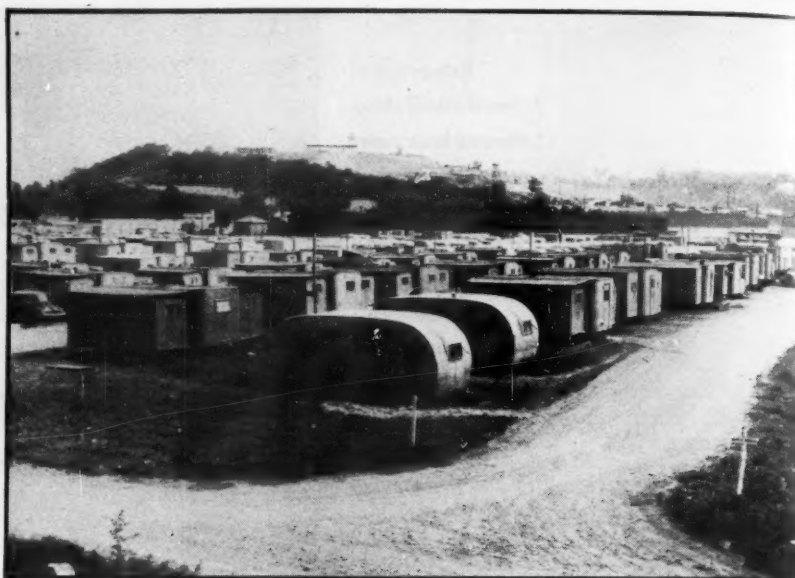
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TUBE MILL MACHINERY



TRAILER CITY at Miamisburg, Ohio, is being used to house construction workers building new Atomic Energy Commission research laboratory (on knoll in background)

eration 30 days ago of its new, Moraine Paper Co. division paper mill, a new investment of \$3.5-million. It's an air-conditioned, windowless, one-floor structure, 300 by 500 ft.

Sunshine Biscuit Co. has completed a \$2-million plant addition containing \$1-million worth of packing and shipping equipment. Employment is expected soon to hit 1,000, or 50% over prewar.

Dayton Rubber Co.: \$1-million post-war expansion, including new factory and warehouse.

Sears, Roebuck has put up a new, modern, three-story merchandising center covering half a block in downtown Dayton; now is building a new warehouse.

Columbus Income Tax O.K.'d by Referendum

The municipal income tax of Columbus, Ohio, has cleared another hurdle. In a special election last week, voters gave it an O.K. at the polls, with 59% of them favoring the levy. The vote beat down a C.I.O. attempt to shake the $\frac{1}{4}$ of 1% payroll-and-income tax that went into effect in January (BW—Jun. 12'48, p73).

• **Fatter Budget**—Now Columbus city fathers have a new job—a pleasant one. That's how to spend the added revenues to best advantage. They look for between \$2.5-million and \$3-million annually from the new tax. This will give the city an operating budget of about \$6-million this year; formerly it has had about \$3.5-million.

Judging from the vote, Columbus residents like the income tax better than

other forms of fund-raising. During the last 14 years they have voted down seven attempts to raise operating funds by levying higher taxes on real estate.

• **More Hurdles?**—The new tax still isn't entirely in the clear. It was modeled more or less after a similar levy in Toledo. The Ohio courts have never passed on the constitutionality of the Toledo tax; suits contesting it haven't been prosecuted. Opponents of the Columbus tax threaten to sue to test the city's right to tax nonresidents (who work in Columbus), and the right of employers to deduct the tax via the payroll.

One other hazard: The phenomenal success of the municipal tax in Toledo may prove a boomerang to Columbus, and to other cities that are eyeing incomes as a source of revenue. There's a chance that the state may move in on this lucrative field. If it enacts a state income tax, the cities may have to scratch elsewhere for pay dirt.

SMOKELESS CITY?

The citizens of Pittsburgh have been wondering lately what that bright light in the sky was. Now statistics have been released which indicate that it was sunshine.

According to the Pittsburgh Bureau of Smoke Prevention, the smoke has been cut 50% since the anti-smoke ordinance went into full effect last fall. For the first four months of this year, there were 132 hours of moderate and heavy smoke compared with 415 hours in the same period of 1945. And Pittsburghers got 39% more of the available sunshine this past winter than they did the winter before.

RESEARCH

419-E
5-26-48

••THE GALLUP POLL••

SPONSORED BY MORE THAN 100 LEADING REPUBLICAN, DEMOCRATIC & INDEPENDENT NEWSPAPERS

SUGGESTED INTRODUCTION: I'm taking a GALLUP POLL. I'd like YOUR opinion on a few leading topics of the day. This Gallup Poll survey will be reported in (insert name of favorite newspaper).

Here is the first question I want to ask you:
1a. Do you approve or disapprove of the way Truman is handling his job as President?
☐ Approve ☐ Disapprove ☐ No Opinion

IF DISAPPROVE, ask:
b. Why?

2a. Will you tell me what disease causes the greatest number of deaths in this country today?

3. What disease is next?

4. Would you approve or disapprove of having the Government spend 100 million dollars for research to find the cause and cure of disease of the heart?
☐ Approve ☐ Disapprove ☐ No Opinion

☐ Qualified

IF APPROVE OR NO OPINION, ask:
4. Would you be willing to pay more taxes to provide this money?
☐ Yes ☐ No ☐ Don't know

5. As you hear and read about Russia these days, do you believe Russia is trying to build herself up to be YET another power of the world, or is Russia just building up protection against being attacked in another war?
☐ Raising Power ☐ Protection ☐ No Opinion

6a. Have you heard or read about the Mundt-Nixon Bill now before Congress?
☐ Yes ☐ No

IF YES, ask remainder of question:
b. What is your understanding of the purpose of this bill?

6. What is your opinion of the bill—are you for it or against it?
☐ For ☐ Against ☐ No Opinion

☐ Qualified

ASK EVERYONE:
7. The Mundt-Nixon Bill now before Congress would NOT make it against the law to belong to the Communist Party—but it would require every individual who belongs to the Communist Party or Communist organizations to register (fill his name) with the Justice Department in Washington. Do you think Congress should or should not

8a. Would you favor or oppose having Negro and white troops throughout the U.S. armed services live and work together—or should they be separated as they are now?
☐ Together ☐ Separated ☐ No Opinion

☐ Qualified

b. Why do you feel this way?

9a. Will you look over all these possible candidates and tell me which ONE man you'd like to see elected President of the United States in 1948? (HAND RESPONDENT CARD).

DEMOCRATIC	REPUBLICAN	THIRD-PARTY
1) Byrd	7) Stassen	3) Wallace
2) Marshall	8) Taft	
3) Truman	9) Dewey	
4) Forrestal	10) Martin	
5) Pepper	11) MacArthur	
6) Farley	12) Green	
7) Douglas	13) Warren	
8) Hynes	14) Vandenberg	

While you will have the card in your hand, let me ask you a couple of other questions.

IF DEWEY, STASSEN, or TAFT mentioned in 9a, ask:
b. If neither Dewey, Stassen, nor Taft can get a majority of votes at Philadelphia and have to drop out of the race, who would then be your choice for the Republican nomination for President?
c. Regardless of how you feel, which man do you think will win the Republican nomination?

10a. What do you, yourself, think churches could do to increase their attendance?

11. Do you think it would or would not be a good thing for all Protestant churches in the U.S. to combine into one church?
☐ Would ☐ Would not ☐ No Opinion

c. Are you a member of a church?
☐ Yes ☐ No

d. (IF YES, ask:) Which denomination? (IF NO, ask:) What is your religious preference?



TO GET THE ANSWERS . . .

This is the American Institute of Public Opinion's 419th question sheet. Gallup conducts his polls through 1,198 field workers across the U. S.; now has international affiliations

. . . GALLUP REPORTER FLORENCE KINDIG . . .

Mrs. Kindig, wife of a school principal, covers Plainfield, N. J., for Gallup. Here she studies questionnaire before going out on her rounds; she gets paid for homework

How Gallup Poll Samples Public Opinion

It has to call this election right — Gallup's prestige in market research hangs on it.



. . . QUERIES A PLAINFIELD (N. J.) GROCER . . .

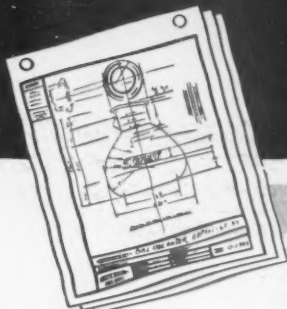
She interviews a middle-income subject, Frank Schatzman. Mrs. Kindig has been feeling the public pulse for a year



. . . AN "ABOVE-AVERAGE" INCOME SUBJECT . . .

She nabs Mrs. W. R. Fickett at home. The door-to-door technique lets her gauge income group by address (TURN TO PAGE 40)

Glass FOR INDUSTRY BY Dunbar



From Cory Corporation, Chicago, came these specifications for a GLASS coffeemaker bowl:

- (1) superior heat resisting glass
- (2) quality selection
- (3) close tolerances
- (4) quantity production
- (5) an oblique cut-off and finished edge
- (6) clean cut striping and stencilling.



Dunbar has filled all of these requirements with the result that Cory Corporation has been able to introduce a unique, automatic, GLASS coffee making service far ahead of anything in its field today.

DO YOU HAVE A PROBLEM GLASS MIGHT SOLVE?

Call on Dunbar, America's most versatile glass factory, to see if molded glass, either lime crystal or heat resisting, can improve your product. We'll be glad to share our 37 years of "glass know-how" with you.

Write for Dunbar's brochure
B.W.A. on
"Industrial Glass"



Dunbar Glass Corporation
DUNBAR, WEST VIRGINIA
New York Chicago Cleveland Los Angeles



... A "MIDDLE" INCOME SCHOOL TEACHER ...

She also tackles some interviewees on the street—in this case high school teacher Frank Fauck. Her interview takes anywhere from 10 to 30 minutes



... MAKES FRIENDS WITH A DOG ...

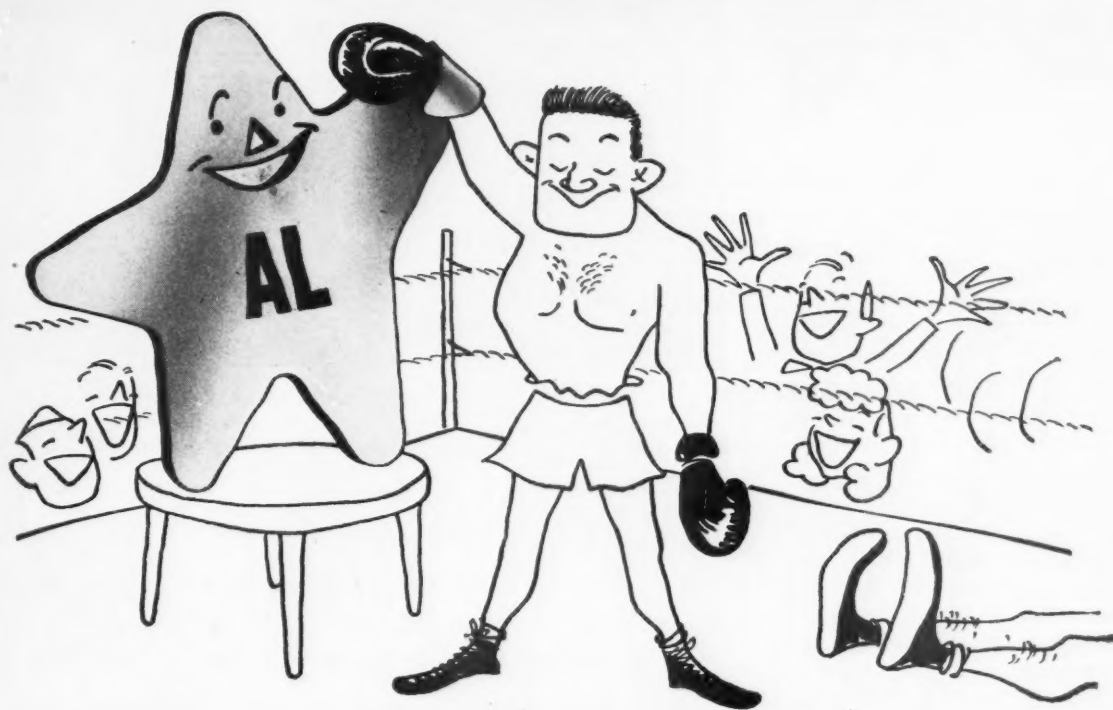
Reporters have their difficulties. Here's one: a watchdog. Occasionally there are also some people who resent the Gallup intrusion in their homes



... INTERVIEWS ANOTHER HOUSEWIFE ...

Mrs. Sandor Lustgarten gives her views. In her town, the ratio runs three "upper" income interviewees to four "middle" and four "lower" (TURN TO PAGE 42)

You're getting stiffer competition
so be more competitive!



● Now's the time to design Allegheny Metal into your products, and get the jump on the field! This time-tested Stainless Steel adds new beauty, new service life—often at little or no added cost—and what's more, Allegheny Metal is available ...you can get the jump on the steel shortage, too!

Complete technical and fabricating data—engineering help, too—yours for the asking.

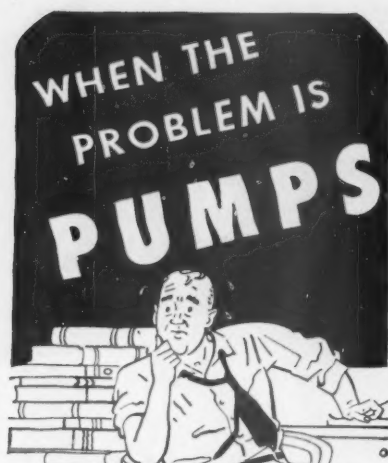
ALLEGHENY LUDLUM STEEL CORPORATION

The Nation's Leading Producer of Stainless Steel in All Forms

Pittsburgh, Penna. . . . Offices in Principal Cities

Allegheny Metal is stocked by all Jos. T. Ryerson & Son, Inc., Warehouses





**CALL IN YOUR
DEMING
DISTRIBUTOR**

When anyone in your organization faces a puzzling pumping problem, suggest that he call in the Deming Distributor who has the close cooperation of our field engineers with their "liquid handling know-how" to solve most puzzling pumping problems. Catalogs on the following Deming Pumps and Water Systems will be mailed to you upon request. Please state types of pumps in which you are interested.

TURBINE PUMPS (water lubricated) for deep wells. Capacities from 15 to 3000 gallons per minute.

CENTRIFUGAL PUMPS of all standard types. Capacities from 2 to 5000 gallons per minute.

SUMP PUMPS and CELLAR DRAINERS. All types. Wide range of capacities.

HIGH PRESSURE POWER PUMPS. Wide range of capacities.

CONDENSATION RETURN UNITS of numerous types and capacities.

ROTARY and OSCILLATING PUMPS in hand and power types. Wide range of capacities.

WATER SYSTEMS. A complete line includes all types in a full range of capacities for all shallow and deep well requirements.

THE DEMING COMPANY
530 BROADWAY • SALEM, OHIO

DEMING
THE COMPLETE LINE
PUMPS AND WATER SYSTEMS



... FINALLY RELAXES OVER A SUNDAE

Mrs. Kindig drops in at a drug store before going home. Interviewing takes three to five hours each week, not counting travel time. Her pay: 85¢ an hour

Market Research is Main Job

Gallup's fame comes from his American Institute of Public Opinion, which takes the Gallup Poll. But the market research done by Audience Research, Inc., puts jam on his bread.

This week Mrs. Florence Kindig and 1,197 other interviewers wound up a six-month job. They completed their final survey on whom rank and file voters want nominated for president in 1948.

Calculating machines in Princeton working over the interviewers' data sheets showed that Dewey and Truman were the popular choices.

And before the first nominating speech is made in Philadelphia next week, 128 newspapers across the land will carry an article, syndicated by the American Institute of Public Opinion, giving the exact totals for Dewey, Truman, and 16 others whose names figured in preconvention speculation.

That is the A, B, C of the Gallup poll. But it's only a minor aspect of the many-sided operations of George H. Gallup (Cover).

• **On the Spot**—Profitably occupied in the fields of commerce, politics, and art, Gallup is a businessman with a wide and fertile domain. He finds, however, that his plant is built on the side of a volcano: If he ever comes up with the wrong answer on who is going to be the next President of the U. S., the standing on which all of his enterprises are based may be swept away. He never forgets the limbo to which the Literary

Digest was consigned in 1936 because it had picked Alf Landon.

Gallup made the big time in 1936 because he called the Roosevelt landslide and the Digest muffed it. And to keep his eminent reputation, he must do the same thing every four years. This very small part of Gallup's work thus makes a quadrennial crisis; from now until November it will mount in intensity.

Actually, the presidential poll question is only one of an average of 20 which A.I.P.O. interviewers query the public on every two weeks—and it appears in only one season every fourth year. At other times, the field forces earn their 85¢ an hour by inquiring into views on European aid, health insurance, veteran bonuses, the common cold, the public villain (a reverse popularity contest which John L. Lewis invariably wins), and literally hundreds of other matters. The 20 questions in the poll this week are the 419th series which Gallup interviewers have worked on since A.I.P.O.'s founding in 1935.

• **Anderson**—Gallup's helpful partner in A.I.P.O. is Harold H. Anderson (picture, page 44), who is the operator of a feature syndicate. Anderson encouraged and financed the early Gallup survey work, which developed into the Gallup

SUPER-CLEAN AIR

proves sound Insurance for
New England Mutual!



AAF Electronic Precipitators Give Complete Coverage Against Damaging Dirt, Dust and Smoke

LOSSES due to soilage, rejects, excessive equipment or building maintenance are too frequently the direct result of dirt laden air—but you can buy insurance against this insidious enemy of profits. New England Mutual—the first mutual life insurance company chartered in America—is fully protected with the installation of AAF Electro-Matic Precipitators as part of their modern air conditioning system.

Building interiors, costly office equipment, priceless records and every employee from the president to the office boy—all are completely "covered" with super-clean air. It's a sound investment that pays off in lower maintenance and improved working conditions.

Every business needs the "insurance" of super-clean air. AAF—with the only complete line of air filters—its expert technical staff—its wide experience gained in thousands of successful applications—can best supply the right answer to your air filtering problems. And, once you experience the benefits of super-clean air, you'll classify it as a necessity to efficient, economical business operation.

For complete information, get together with your nearest AAF representative or write direct to:

AMERICAN AIR FILTER COMPANY, INC.

387 Central Avenue, Louisville 8, Ky.

In Canada: Darling Bros., Ltd., Montreal, P. Q.



AIR FILTERS
AND ELECTRONIC PRECIPITATORS

CROTTY-OPERATED CAFETERIA OF THE GENERAL BRONZE CORPORATION,
GARDEN CITY, N. Y., SEATING 400.



*"General's
Cafeteria
Helps a Lot"*

In saying that, Bill Summo is remembering last winter, particularly. For he and his yard supply gang at the General Bronze Corporation certainly found their restaurant a morale booster, after working outdoors in the record-breaking snow and cold.

But the company cafeteria "helps a lot" in other ways, too. Bill and his co-workers find this attractive dining hall a pleasant place to eat any day. They like its convenience . . . the appetizing, nutritious and economical hot foods it provides "on the job."

For professional know-how in the operation of their restaurant, General Bronze employs Crotty Brothers' eighteen years' specialized experience in in-plant feeding. This relieves management of the thousand-and-one details, while conforming in every way with company policy.

General Bronze is proud of its beautiful, new plant and its well-run cafeteria. Part and parcel of a far-sighted industrial relations program, R. W. Foster, Personnel Manager, credits these attractions with "holding" nine out of ten of their practically irreplaceable, ornamental bronze craftsmen, when they moved thirty miles recently from Long Island City.

★ From a series of case studies of in-plant feeding made by Richardson Wood, Industrial Analyst. A copy of his report on management's opinions about employee feeding will be gladly sent free on request.



OPERATING IN 16 STATES AND 39 CITIES
137 NEWBURY STREET • BOSTON 16 • MASS.

INDUSTRIAL RESTAURANT MANAGERS EXCLUSIVELY SINCE 1930

Poll. He now handles the business side of A.I.P.O.

In reality, A.I.P.O. is the lesser of the two main Gallup enterprises. Its end products are twice-weekly news releases which tell the story of what the polls have found. These releases go to A.I.P.O.'s only customers—newspapers—through Publishers' Syndicate in Chicago, which Anderson heads. Most papers buying the Gallup by-lined bulletins—for a fee geared to circulation—play them prominently as a standing feature. And that makes the dimensions of Gallup as a public figure. But this enterprise by itself doesn't make him much of a living.

• **Audience Research**—Gallup's important income comes from Audience Research, Inc., an enterprise he founded in 1936. It is estimated to have averaged an income of around \$400,000 for the last half-dozen years. Among its present clients are several of the big movie companies including RKO, Columbia, Walt Disney, and Goldwyn; book clubs and pocket book publishers, including the Book-of-the-Month Club and Bantam Books; and a large number of advertising agencies that produce radio programs.

A.R.I., as it is known in the trade, is a market research company. Its specialized techniques are offered only to a selected group of clients, simply because its service is expensive to maintain and conduct. It would, for example, turn down a breakfast food manufacturer as a client. One survey would answer such a client's questions about his market; or maybe one every few years when he considered changing his package or his advertising appeal. The same goes for an automobile company; it wouldn't have much use for an A.R.I. job more



PARTNER Anderson, who also runs Publishers' Syndicate, helped Gallup get started

"Cordura" Tenacity Rayon

**For high strength at low cost
... look into Cordura***

There's a long lift involved for conveyor belts that carry coal and ore from mine pits to loading stations. To give these belts the terrific tensile strength required, engineers have turned to Du Pont "Cordura" High Tenacity Rayon.

"Cordura" makes possible a lighter belt—and a longer belt. One-piece conveyor belts made with "Cordura" eliminate costly, troublesome transfers. And they tough easily—have remarkable resilience.

"Cordura" is engineered to yield much greater strength than natural fibers. And each strand is a continuous filament—no short pieces to pull apart under strain.

Perhaps you'd expect to pay a premium for the advantages of "Cordura." But in many cases you can reduce production costs because you get so much strength from so little!

It will pay you to find out more about the advantages that Du Pont "Cordura" High Tenacity Rayon contributes to conveyor belts—and to other products, such as V-belts . . . tires . . . industrial hose. Perhaps this development of Du Pont research can improve an article you make. Whether you are a manufacturer or a user of a finished product, write for more information about "Cordura." Address Rayon Division, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.



**BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY**



for RAYON... for NYLON... for FIBERS to come... look to DU PONT



A TITLE WAS CHANGED by market research. When the New York run of Samuel Goldwyn's "The Bishop's Wife" started this year, it was so advertised (left—Dec. 31). But that lacked punch; Cary Grant got closer to the title Jan. 7 (center). Finally the movie became "Cary and the Bishop's Wife" (right—Mar. 31).

than once a year when it was bringing out its new models.

The way Gallup has A.R.I. set up, the top level technical and administrative staff has to work on paying business 12 months of the year in order for the company to earn enough to support it. Its potential clients, therefore, are limited to companies which constantly bring out new products—and, further, have a large financial investment in each new production.

• **Ideal for Hollywood**—Thus, the movie industry is an ideal Gallup preserve; in fact A.R.I. was originally conceived to serve it. And here—illustrating how A.R.I. works—is what the full Gallup treatment would be like in the case of a Hollywood production:

A New York publisher has rushed sets of galley proofs of a new novel called "Ten Tiny Toes" to a dozen movie producers. One of them, a Gallup client, immediately calls A.R.I.'s Hollywood office. "Look," he says, "we've got 48 hours to get in a bid on this story. We think it might make a good 'A' picture. But we've got to move fast; at least two other studios are after it."

The A.R.I. people groan: "Can't you take an option on it and get us a little time to take some tests?"

• **Tentative Advice**—But the answer is almost always "no," so a quick summary of the plot of "Ten Tiny Toes" gets teletyped to A.R.I.'s Princeton office. Let's say the bare bones of "TTT," as it's already called, is as follows: Boy meets girl; boy loses girl; boy gets girl; they have a baby.

Story plots—at least those in which

the movie industry has an interest—tend to fall in standard categories. A.R.I. has accumulated a great deal of information on movie audiences' reactions to most of the typical ones.

Within 12 hours Gallup can have on the teletype to Hollywood some tentative advice on how "TTT" might do. It will be extracted from him only with the greatest reluctance: He won't commit himself without making a "live" survey.

But even before Gallup's message gets to the producer—if this hypothetical case is to maintain verisimilitude—the producer has made his bid on the book, under the goad of Hollywood's frenetic competition. It's knocked down to him. And A.R.I. moves into what, in some instances, has turned out to be a five-year job.

• **The Sample**—First, A.R.I. carefully selects for interviewing a cross-section of the moviegoing population. Factors considered for picking, in miniature, the characteristics of the nation's moviegoers are: sex, age, income, education, location, occupation, frequency of movie attendance, etc. Each group is included according to its proportion in the total moviegoing population—a "universe" which Gallup constantly studies and about which he has amassed voluminous statistics.

A.R.I. interviewers submit to this cross-section a synopsis of "TTT." They are asked whether they would like to see it in a movie.

If the reaction to "TTT" is not all the producer hoped for, variations will be tried. Suppose the book's original

locale and period was California in the '49 Gold Rush. The same story may be tested in a present-day Monte Carlo setting. If the potential audience appeal can't be raised sufficiently by such alterations, the plot itself may be overhauled. Instead of boy meets girl; boy loses girl; boy gets girl; they have a baby, the story might be tried as boy meets girl; boy loses girl; BUT she has a baby; boy gets girl.

• **New Angles**—Whatever combination rates the highest appeal becomes the basis for writing the script. Meanwhile, the book has been published and the Gallup organization keeps close track of it. They want to know how it's selling and where; what kind of advertising is stimulating sales and what kind is missing the mark; whether the author is acquiring any public personality which may later be exploited, plus whatever else they can learn about the book and its market.

Next A.R.I. will test the title. If the book hasn't made the best-seller lists or been the subject of controversy, only an inconsequential number of potential moviegoers will have heard of "Ten Tiny Toes." Gallup wants to know how much drawing power that will have on a marquee.

Let's say he finds that the title gets a favorable response from young married people and people old enough to be grandparents, but that it leaves the younger generation cold. That means it's bad. Young married people don't go to movies much, Gallup's statistics show, and the grandparent bracket goes even less. To be a success, it's got to

appeal to the 16-19 year old group; and to be a smash hit it's got to whet everybody's appetite.

So A.R.I. will test different titles, just as fast as the producer can think them up. In this case, it might be found that "Two New Heels" is the word combination which, at this point, promises the largest audience. "TNT" is thus retitled and casting on "TNH" is ready to begin.

• **Casting**—Gallup then swings into his next survey: Who would you like to see in a movie called "Two New Heels" which tells such-and-such a story?

A.R.I. carries out continuous studies of the drawing power of the leading 175 actors and actresses. This regular survey consists, basically, of simply asking moviegoers whether a given star's name in front of a theatre would make them want to buy a ticket. Gallup fits this information into what he finds out about public preference for the cast of "TNH" and makes another preproduction report.

Let's say Lana Turner turns out to be the public choice for the starring role. The studio's advertising department starts to plan promotion angles. They have learned over the years—with Gallup's help—that Miss Turner's audience appeal rests primarily on certain physical characteristics which she possesses. They want to exploit them in wide-spread display advertising. The central illustration for their displays will be Miss Turner in a low-cut, revealing gown—although not in profile because of the industry's morals code. "Two New Heels" doesn't quite strike the note. Gallup and the promotion people go into conference. A new title is hammered out, tested. It proves to have audience appeal, and it pleases the promotion-men. The cameras start to grind out "Madame Has Twins."

• **Penetration**—In a full-scale A.R.I. job, Gallup's work still isn't done. Once the picture is released, Gallup begins tests of its "penetration." Are enough moviegoers hearing about it? What are the blank areas that the publicity isn't reaching? What are people saying about it to their friends? Answers to such questions determine how the merchandising techniques being used may be profitably altered.

With variations, this same A.R.I. process is applied to book titles and radio programs. A.R.I. can supplement it with what it calls its Preview Profile Jury System. It controls the patents on the Hopkins Televote Machine, an electronic device which averages and records on a moving tape the reaction of an audience as individuals: Everyone present registers his response to what he sees and hears on a separate dial in his hand. With it, movies, radio programs, and television shows can be pretested. The preview radio service is available to



Automatic Sprinkler

FOR INVESTMENT PROTECTION

TEXANS safeguard
their production with
"Automatic" Sprinklers

AMERICAN INDUSTRY, owing to its constant expansion and development, presents to business management a definite challenge—a distinct opportunity. Yet business survival is dependent upon continued operation, and the menace of fire and its resulting destruction is always prevalent.

That leads us to the often asked question—"What makes a structure fire-safe?" It is well to keep in mind that you are not completely safe just because yours is a so-called fireproof building. Modern construction alone offers practically no protection. Fires that daily occur in such properties are mute evidence to the fact that a structure is only as fireproof as are its contents. Unfortunately, many realize too late the important role being played by *"Automatic Sprinkler"* in safeguarding American industry. Recorded statistics on the effectiveness of *"Automatic Sprinklers"* prove them to be industry's most effective weapon against fire... the very backbone of any good safety system.

These facts are the reason why thousands of business executives, not only in Texas, but throughout the country at large, specify *"Automatic Sprinklers"* for both old and new construction. They look upon them as their first line of fire defense, an important investment today... perhaps welcomed protection tomorrow.

"Automatic Sprinkler"

FIRST IN FIRE PROTECTION

DEVELOPMENT • ENGINEERING MANUFACTURE • INSTALLATION

"AUTOMATIC" SPRINKLER CORPORATION OF AMERICA
YOUNGSTOWN, OHIO
OFFICES IN PRINCIPAL CITIES OF NORTH and SOUTH AMERICA



ALL EXACTLY ALIKE

To speed your production
...to improve your product

Because Hyatt Hy-Load Roller Bearings are mass-precision-produced, the separable component bearing parts are freely interchangeable. Thus, on your final assembly lines, subassemblies go together without fussy selection or "matching" of bearings. Time and labor are saved.

And because Hyatt Hy-Loads are available in 10 major types—more than 500 sizes—in two diameter series, wide and narrow widths—your design engineers can select the bearing best suited to your needs.

Write for information. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS

an advertiser for around \$5,000. It can cost less, or much more, depending on how many program ideas are to be tested.

• **Art of Questioning**—Fundamentally, however, the usefulness of both A.R.I. and the American Institute of Public Opinion rest on two Gallup specialties: (1) the scientifically constructed question; (2) the selection of the cross-section.

It's an axiom in polling that you can get any answer you want to any question, depending on the way you ask it. Angling questions to get responses that will please the client, rather than tell him some unpleasant facts, is far from unknown in this business.

Even without intending it, pollsters can load their questions. Thus, for example, a Gallup Poll on "Gone With the Wind" showed that more people claimed to have read the book than there were literate adults in the U. S. Gallup threw the results out, knowing that his question was somehow put wrong. He had asked, "Have you read the book?" No one, apparently, wanted to admit that he hadn't. So he asked, "Do you intend to read it?" And what seemed a reasonable number said they already had, the others said they were going to. The question originally had what Gallup calls a "prestige factor" which gets distorted responses.

• **Pre-Testing**—Gallup pretests every question he uses on a small sample of the cross-section he intends to poll. He will revise its wording again and again until he has evidence that it has become absolutely flat—free of any color or association that will bring an untrue response.

Gallup has also developed what he calls the "Quintamensional Plan of Question Design." It is designed to provide a qualitative as well as quantitative measure of opinion through probing five levels. It works this way:

Question No. 1 finds out what a person knows about the issue.

No. 2 is an "open" question, determining what he thinks about the issue and letting him talk freely.

No. 3 puts the issue starkly on a "yes-or-no" basis.

No. 4 gets the person interviewed to tell why he feels as he does.

No. 5 finds out how strongly he is wedded to that particular opinion.

• **Impact**—Gallup is getting further and further into so-called qualitative research, in contrast to the old nose-counting of traditional polling. He is after basic information on public tastes, habits, prejudices, and emotions.

Scheduled for commercial production shortly is an advertising pretest idea incorporated in a publication referred to as Impact. It will look like a standard picture magazine and will be delivered to a selected group of homes. It will

"Versatile"



Also available
in full keyboard,
hand and electric.



Victor is the world's largest exclusive
manufacturer of adding machines.
Now in our thirtieth year.



"VICTORS are VERSATILE"

says Jack Timpy, Comptroller, Nash-Kelvinator Corporation. "The manufacture and sale of Nash motor cars and Kelvinator refrigerators involve many instances where calculation of addition, multiplication, and subtraction speed individuals' work. Because of their versatility, we have found Victors well-suited to our needs in such cases."

Add, subtract, multiply, divide, compute credit balance. Victor's new all-purpose adding machines are your answer for fast, diversified figure work. They perform so easily, anyone can operate them.

As the world's largest manufacturer of adding machines, Victor upholds its reputation for precision in performance through precision in production, backed by thirty years of specialized research and "know how."

See how Victor's versatility may serve you better — more economically in your business. Your nearest Victor representative will gladly bring you a machine for demonstration. Call him today.

Now Add these VICTOR PLUS FEATURES:

- 1 Cushioned feather-touch keyboard and "live" control keys give speed, accuracy, ease of operation.
- 2 Light weight, about 15 pounds. Easily carried. Covers almost same space as 8 1/2" x 11" letter.
- 3 Both full-key and 10-key keyboard electric models available with automatic credit balance.
- 4 Fully guaranteed. Nationwide service points conveniently located to insure prompt, efficient service.

FREE TO BUSINESS PEOPLE. "The Secret of Speed," a valuable new booklet of tested techniques for increasing efficiency of adding machine operators. Or ask for a demonstration of the new Victor. State preference, send name and business address to Victor Adding Machine Co., Dept. 4, Chicago 18, Illinois.

VICTOR ADDING MACHINE CO.

Direct factory branch offices and authorized dealers everywhere. Consult your local phone book for nearest representative, or write us, Chicago 18, Ill.



The Office Manager has a new sweetheart

She's a honey . . . that new Davidson Office Folding Machine. No wonder the office manager is all smiles. One girl . . . just one, mind you . . . with this machine, does all his folding now . . . without overtime. Monthly statements, bulletins, form letters, advertising literature . . . all such things are folded quickly . . . easily . . . at a fraction of the cost of hand-folding. And . . . he doesn't have to pull half his employees from their regular duties like he used to.

The Davidson Model 120 Folding Machine is so simple and easy to operate. Any competent employee can handle it. It will fold from 7,500 to 20,000 sheets per hour, the speed being governed by the sheet size. It's motor driven and feeds automatically. You can replenish the load without interrupting operations. And it handles sheets from 3" x 3" to 10" x 14".

Here's a piece of equipment that will quickly pay for itself even though you use it only one day a month. It's available in the floor model as shown or as a table model. Both are ready for prompt shipment.

Write for literature or, if you like, we'll arrange for a demonstration. There's no obligation.

DAVIDSON MANUFACTURING CORPORATION
1034-60 West Adams St. Chicago 7, Illinois

Davidson Sales and Service Agencies are located in principal cities of the U.S., Canada, Mexico and abroad.

Davidson

Office FOLDING MACHINES



DUPLICATORS • OFFICE FOLDING MACHINES • PAPER MASTERS • SUPPLIES
A GENERATION OF EXPERIENCE IN THE MANUFACTURE OF OFFICE EQUIPMENT

contain a number of standard ads, and some which appear in it for testing purposes.

Suppose, for example, you are a children's toy manufacturer and are trying to decide which of several ideas you will base your next national advertising campaign on. You can try each of them out in Impact, and Gallup interviewers will go into those homes where there are children to determine the effect of alternative ideas on a sample cross-section of your market. A tire manufacturers' copy would be tested on car-owning families, a small air-conditioner program on homeowners, etc.

Impact will also test copy and layout effectiveness as well as theme ideas. Its great advantage is claimed to be its bull's eye placement in any product's market. Presumably, the toy manufacturer isn't interested in how his ads strike the high school set.

• **Gallup's Key**—All of this—and all the Gallup operations—would be only academic exercises unless Gallup had a key to the cross-section. Anybody, asking the right question, could find out how America thought on any issue by asking everybody. The trick is to find out by asking a comparative handful.

Obviously it can't be just any handful. They may turn out to be mostly easterners, or veterans, or unionists, or of Irish extraction—factors which are known to influence opinions. Neither Gallup nor any other poll taker looks for people whose opinions are uninfluenced by something in their background, temperament, or situation. What is sought is a sample group which has in it easterners, veterans, unionists, Irish, and all other opinion segments in the same proportion as they appear in the universe which Gallup wants to learn about. And that universe, for one test, may be all the people who buy books; for another, it may be all who normally vote Republican.

If America were a rigid class society where everyone's outlook was determined by the economic class to which he belonged, the perfect cross-section for opinion polling might not have to include more than two people: one rich and one poor. To get pretty exact information on how people divided for and against any proposition you would simply multiply a poor man's opinion by the number of people in his income group; do the same for the rich; then reduce the figures to percentages.

• **Constant Flux**—America, however, is perhaps the most fluid and complex society the world has ever known. Not only must sampling of its opinions utilize a numerous cross-section to be representative, but the proportions within that cross-section must be constantly changed to keep pace with flux in the universe.

Once the population sociologist like



EDITOR William A. Lydgate handles A.I.P.O. releases, thinks up most of the questions for the Gallup Poll, and is the chief editor of World Opinion. Eleven Gallup affiliates in as many countries provide World Opinion with a quarterly compilation of information they have been gathering. Though independent of A.I.P.O., each will periodically poll the same question. Thus, a forthcoming report will tell how easily people say they fall asleep from Rio de Janeiro to Helsinki.

Gallup establishes the cross-section, the statisticians must assign weights to the homogeneous opinion groups within it. And these weights must correspond to the proportion of that group to other groups and to the universe, and they must shift as the proportions shift. Otherwise a cross-section valid in one period, produces wrong results in others.

This is exactly what happened to the Literary Digest poll—its list of telephone subscribers pretty accurately reflected national political opinion up until 1936. Gallup, therefore, is constantly at work, testing, refining, recalculating his cross-section. What he does in that area is his one trade secret: To stay on top of his field, it's the place he has to have an edge on his competitors like Elmo Roper, Claude Robinson, Crossley, and the others.

GULF-KOPPERS RESEARCH

The oil industry is paying more and more attention to coal as a source for liquid fuels (BW—Jan. 24 '48, p. 21). Last week came another step in this direction: Gulf Oil Corp. and Koppers Co., Inc., specialist in solid-fuels technology, announced they had started work on a cooperative research program on the coal-to-gas-to-liquid-fuels problem. Joint pilot plants may be set up under the agreement.

Check THE FIXTURES YOU BUY FOR TURRET LAMPHOLDERS



SAFETY FEATURE—The hazard of falling lamps is virtually eliminated when fixtures are equipped with General Electric Turret lampholders. Each spring-backed plate contains two holders into which the fluorescent lamp pins are inserted. Snug fit and uniform spring tension hold the lamps securely in place.

CONVENIENCE—Lamps can be installed from either end of the Turret. Either face of the Turret is depressed by one end of the lamp, and the other end is then slipped into place. The lamps are automatically held in firm contact. Removal of dead lamps is equally easy. The starter socket is built-in, and is readily accessible.

ECONOMY—Turret lampholders have the ability to withstand rough handling without being damaged, which means that there is no costly replacement problem. Elimination of safety gadgets means another saving. In addition, the availability of three sizes of Turrets simplifies fixture design, and permits a wide selection of lamp arrangements.

SERVICE—The sturdy metal construction of General Electric Turret lampholders is designed to stand hard usage. All working parts are made to give long service—as long as the fixture itself lasts. This durability helps to provide top-notch fixture performance . . . maximum lighting efficiency.

To simplify your lighting maintenance, and to get the utmost in fluorescent lighting efficiency, it pays to insist on General Electric Turret lampholders in every industrial and commercial fixture you buy. Lamps are not staggered, but are mounted in a straight line, thus giving maximum efficient, shadowless lighting.

Just check the advantages of having these durable lampholders. Compare General Electric Turret lampholders with any other type of lampholder on the market. You'll find that they offer economy in upkeep, great safety, and long service.

General Electric Turret lampholders have made an outstanding record of dependable operation in thousands of fixtures now in use. They can contribute a great deal to your "better lighting," too.

A new General Electric Turret lampholder will accommodate three lamps. Two-lamp lampholders are also available, with receptacles spaced on 3½-inch or 5-inch centers. For information on G-E Turret lampholders, write to Section Q9-610, General Electric Company, Bridgeport 2, Connecticut.

*TRADE-MARK REG. U.S. PAT. OFF.

GENERAL ELECTRIC



ENDS MANUAL TRANSCRIPTION



ENDS PROOFREADING



ENDS MISTAKES

3 of the biggest headaches in your office are eliminated by simply using ordinary translucent paper—instead of the opaque kind.

You type, draw or write in usual manner—but now every sheet of paper is a “master”—which can be reproduced in 25 seconds in the new Ozalid Streamliner.

Use this technique for sales reports, accounting ledgers, file records . . . and information is at your finger tips—whenever needed . . . at cost of less than 1½ cents per 8½ x 11-inch Ozalid print.

Free booklet gives full details. Mail coupon today.

OZALID

DEPT. No. 118

A Division of General Aniline & Film Corp.
Johnson City, New York

Gentlemen: Please send free copy of “The Simplest Business System” . . . listing job-by-job savings.

NAME _____

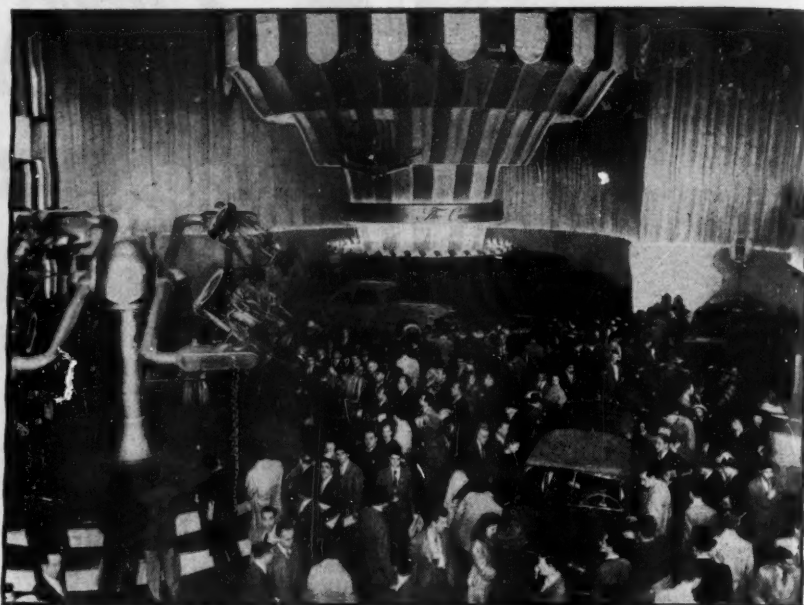
POSITION _____

COMPANY _____

ADDRESS _____

Ozalid in Canada
Hughes Owens Co., Ltd., Montreal

AUTOMOTIVE



CROWDS jam grand ballroom of New York's Waldorf-Astoria to see '49 autos as . . .

Ford Puts on a Big Show

Auto maker spends more than \$500,000 to introduce its new models. Six-day extravaganza includes exhibits, demonstrations, music, beautiful girls. A year of planning went into it.

When the Ford Motor Co. unveiled its 1949 models in New York's Waldorf-Astoria Hotel last week (BW-Jun.12 '48,p28), it put on a sales extravaganza that must have turned Grover Whalen green.

• **Cost**—The total cost has been estimated at more than \$500,000. Ford rented the Waldorf's grand-ballroom floor for 12 days. Besides that, there were several suites for offices, and about 300 rooms for executives and staff. Dozens of out-of-town newspapermen were put up at other hotels. Ford brought so many executives, newspapermen, and wives on from Detroit for the opening that the New York Central had to run a special section of its crack “Detroiters.”

The day before the official opening there were previews for the press and for celebrities. Miniature Fords were given away. The company set up six bars. It was like the good old days of prewar auto shows: colorful decorations, company brass in a receiving line at previews, name orchestra playing dance music, sales blurbs over loudspeakers.

• **Big Attendance**—Several hundred thousand potential customers saw the new Fords during the six days they were on public display in the country's big-

gest retail market area. There was plenty for them to gape at.

A miner ('49-cr) distributed plastic “Ford” nuggets painted gold, supposedly panned from a nearby running stream. A 15-ton “ferris wheel” slowly turned in three directions at once, two full-size Ford chassis of copper-bronze and brass, cut away to show working parts. A merry-go-round 50 ft. in diameter carried five Fords with beautiful girls, recruited from Powers and Conover, inside.

Elsewhere in the ballroom, large-size models of parts of the new Ford were explained by narrators. Lincolns and Mercurys were also on display.

• **Publicity**—The Waldorf show was covered by radio, television, and newsreel, as well as by newspapers and magazines. A Ford blimp cruised over the city, when weather permitted. Fred Allen went down Allen's Alley asking its famous residents what they thought of the New Ford. There had been advance teaser ads on thousands of billboards, in national magazines, in newspapers.

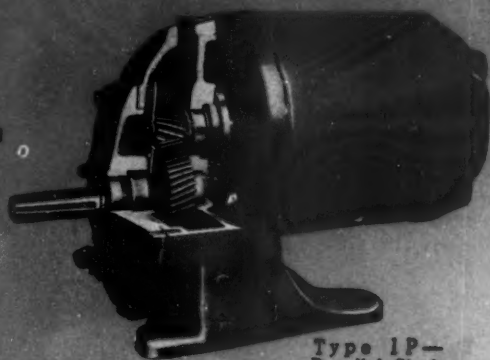
Local Ford dealers got posters, tips on how to feature the new models, movie shorts for use in local theaters. After the New York show, Ford dealers were

CENTURY

Fractional Horsepower

GEAR MOTORS

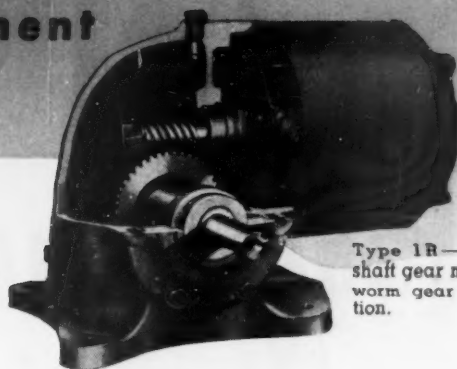
**Are Engineered to Maintain
the High Torque Slow Speed
Shaft in Rigid Alignment**



Type 1P—
Parallel Shaft
Gear Motor,
one step speed
reduction.



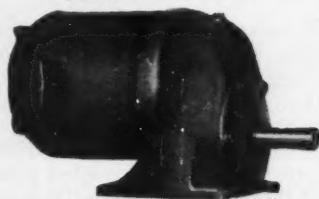
Type 1R—Right angle
shaft gear motor, one
step worm gear speed
reduction.



Type 1R—Right angle
shaft gear motor, one step
worm gear speed reduc-
tion.



Type 2R—Right angle
shaft gear motor, two
step speed reduction
—one step helical
gear, one step worm
gear.



Type 1P—Parallel
shaft gear motor, one
step helical gear
reduction.



Type 2P—Parallel
shaft gear motor, two
step helical gear
reduction.

The mounting feet of Century Gear Motors are an integral part of the rugged compact gear housing—provides a strong, rigid unit. Additional mechanical strength is achieved by locating the shaft close to the base of the gear housing. This method of construction holds the high torque slow speed shaft in rigid alignment, and reduces stresses.

The motor is equipped with ball bearings. Large taper roller bearings in the gear unit handle heavy radial or thrust loads.

Century Gear Motors are built in standard sizes from 1/8 to 3/4 horsepower — single phase, polyphase and direct current.

Century's line of fractional horsepower gear motors has gained an enviable reputation for outstanding performance. Many thousands of them have been put into service since their introduction eight years ago.

Specify Century Gear Motors for all your fractional horsepower slow speed requirements.



CENTURY ELECTRIC CO.

1806 Pine St., St. Louis 3, Mo.

Offices and Stock Points in Principal Cities

560



CALCULATED

Performance

Flawless form, perfect timing, and controlled power take the track star over the high hurdle with ease. His performance is calculated for every foot of the 120-yard course. As he glides over the barriers, the hurdler allows an exact number of inches above the bar. There can be no margin for error in his calculation.

Years of building physical stamina and long hours of practice make for perfection on the cinders... contribute the experience that is the source of control, timing, and winning form. Thirty years of experience enable the engineers of the Twin Disc Clutch Company to take hurdles in the field of power transmission in their stride. Exact calculations are the basis for the sound design and precision manufacture of Twin Disc Friction Clutches and Hydraulic Drives. These calculations, based on experience, have made possible the efficient performance of all Twin Disc units.

You can hurdle your barriers in the field of power transmission with the help of Twin Disc engineers.

Write for their recommendations on your power problems.

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin
(Hydraulic Division, Rockford, Illinois).



SPECIALISTS IN INDUSTRIAL CLUTCHES SINCE 1918

scheduled to put on cooperative showings in Detroit, Washington, Philadelphia, Chicago, St. Louis, Los Angeles, Kansas City.

• **Planning—Staging** a show like this took more than a lot of cash. It took advance planning—a year of it. Ford's assault on the American imagination was as carefully worked out as the invasion of Okinawa.

Take the little plastic models given away to the press, for instance: These were scaled to exact dimensions by the engineering department. Ford contracted with Aluminum Model Toy Co. of Detroit for 500,000 of the toys, bonded the maker to be sure its new model would stay secret—then stored the finished toys in bonded warehouses. Now that the 1949 Ford has been revealed, they will be passed on to dealers. And stores are ordering them. Ford has already received inquiries for 3-million, to retail at about \$1.29.

• **Built in Dearborn**—As for the Waldorf show itself, many of its ideas were sketched out by industrial designer Walter Dorwin Teague. The whole show was planned with the Waldorf ballroom in mind (it won't appear elsewhere in this form). The sets were built in miniature, tested, and modified. Then the final displays were built in Dearborn, tested, and shipped to New York.

Ford set up a news bureau in the Waldorf two weeks before the show started; put out advance press releases to see that its mimeograph machines were working, that the distribution system was O.K. All office supplies to the last paper clip were brought from Dearborn. This news bureau had its own switchboard, its own telephone directory.

Cadillac Drops California Distributor

The trend away from the distributor (wholesaler) method of selling new cars continues (BW—May 22 '48, p. 70). Cadillac Division of General Motors Corp., one of the last four holdouts, says it has no intention of abandoning the system. Nevertheless, it has just reached a parting of the ways with one of its biggest distributors.

• **Long Tieup**—Ever since 1911, Don Lee, Inc., has handled Cadillac's business with California dealers. Now Cadillac says it will set up factory sales branches in Los Angeles, San Francisco, Oakland, and Pasadena to take over distribution.

Reason for the breakup of the long Cadillac-Lee relationship was not given. One Detroit guess: The Lee organization was simply unable to cope any longer with the size of its market. More than 10% of Cadillac sales are concen-

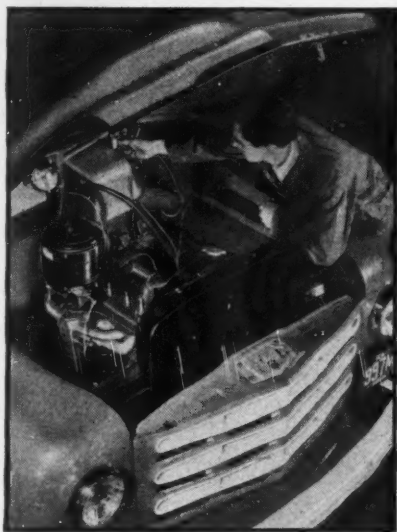
trated in California today—close to \$20-million a year at wholesale prices.

• **Other Branches**—Cadillac has similar factory branches at Chicago, Detroit, and New York. All, like California, are big Cadillac markets.

Studebaker Trucks Have



Enclosed Steps, and . . .



. . . Under-Hood Room

The 1949 Studebaker truck family has grown by two models: a $\frac{3}{4}$ -ton truck and a 2-ton truck. A notable feature in all models is increased accessibility under the hood. All electrical wiring and gages are out in the open. And a big hood opening provides enough room to reach the engine from all angles. Enclosed steps instead of open running boards let a driver get in and out of the cab with passenger-car ease.

Before the war, Studebaker was turning out 12 passenger cars to one truck. Today, the ratio is two passenger cars to one truck.



Will an unscheduled jolt to your product in transit bring you another damage claim—or result in loss of consumer good will? You can minimize these worries by safeguarding your product in tough Gaylord Boxes—*designed for safe delivery* • • Call on the nearest Gaylord Office for competent help on your packaging problems.

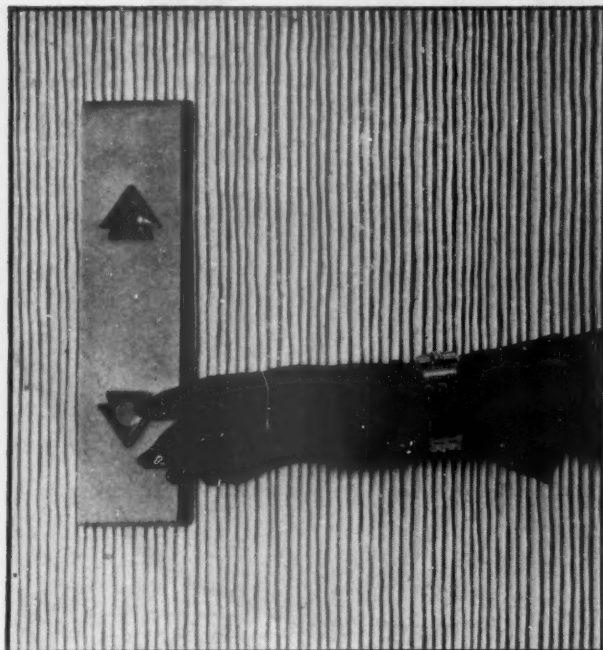
- Corrugated and Solid Fibre Boxes
- Folding Cartons
- Kraft Grocery Bags and Sacks
- Kraft Paper and Specialties

GAYLORD CONTAINER CORPORATION

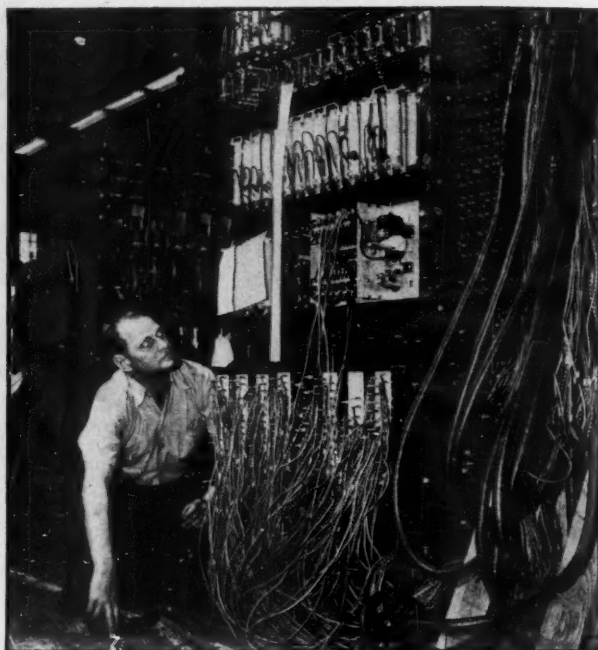
General Offices: SAINT LOUIS

San Francisco • Oakland • Los Angeles • Portland • Seattle • New York
Chicago • Atlanta • New Orleans • Jersey City • Indianapolis • Houston
Minneapolis • Detroit • Jacksonville • Columbus • Fort Worth • Tampa
Cincinnati • Dallas • Des Moines • Oklahoma City • Greenville • St. Louis
San Antonio • Memphis • Kansas City • Bogalusa • Milwaukee • Chattanooga
Weslaco • New Haven • Appleton • Hickory • Greensboro • Sumter • Jackson

PRODUCTION



A FLICK OF A FINGER sends an electrical message to a . . .



COMPACT BRAIN in a penthouse. With this device . . .

Otis Controls Elevators Electronically

Use of electronics simplifies elevator installation and maintenance, promises more precise control for high-speed operation.

Electronic controls have become almost commonplace in industry, especially when there's a need for split-second precision. Now the versatile technique is doing a new job: taking the "push" out of elevator pushbuttons. This week, Otis Elevator Co. announced that it has perfected a new type of electronic elevator signal.

• **How It Works**—The would-be passenger, at any floor, touches a disk set in a wall fixture. Behind that wall fixture is a relatively simple electronic signal circuit with a tiny tube. By touching—not pushing—the button, the passenger disturbs the electrical balance in the circuit and a small current flows. This does two things: (1) It lights up the signal; (2) it sends a message to the brain center in the penthouse, and the message is relayed to the traveling elevator. Current continues to flow until the car stops and levels at the correct floor.

The first commercial application of the Otis Electronic Signal Control is in New York City's big postwar office building, a 21-story structure at 445 Park Ave. Electronic "touch" buttons on either side of the foyer on each floor control the operation of four local and four express elevators. The construction

and installation were made by Otis at a cost of \$400,000.

The development had been thoroughly tested in "pilot" service at the Otis headquarters building in New York before the commercial installation was made. According to Otis engineers, the control can be used on any elevator, but early installations will be limited to buildings in which elevators travel at 500 ft. per min. or more.

• **Advantages**—Otis engineers have been working on electronic controls for several years. They say the device has many commercial advantages.

- (1) Installation is simpler;
- (2) Many mechanical and electrical parts are done away with (in a 20-story building, for instance, over 40 electrical relays are cut out);
- (3) Less wiring is required;
- (4) No separate lamps are needed to "light up" the signal—the tube does that for free;
- (5) Maintenance is easier, and the annoying gremlins who stick gum and pins in pushbuttons are permanently foiled.

• **Evolution of Controls**—Electronic signaling is the latest of many forward steps Otis engineers have taken. Their

work began way back in 1852, when Elisha Graves Otis invented an elevator safety device. This prevented a car from falling if the hoisting rope broke. Otis installed its first passenger elevator in 1857.

Up to 1889, hand, steam, and hydraulic power raised and lowered the cages. The "control" used by the operator was a rope that ran through the car to the power source. Signals such as those known today were not available. When electric elevators came in, push button signals were developed; at first they only informed the operator where to stop; later they stopped the car at the proper floor automatically.

Such controls allow elevators to move at speeds up to 1,400 ft. per min. The electronic device, with its split-second accuracy, promises even more efficient service at even higher speeds.

• **Many Skills Needed**—The manufacture of elevators is much more complex than it seems. It requires extensive engineering, and production ability in many fields—electrical, mechanical, casting, machining, and finishing. Otis not only makes its own signals, but also it manufactures its own motors, makes its own castings, does special tooling and machining, and installs the devices. A step-by-step picture story, beginning on the next page, illustrates this manufacturing diversity.



1 Electrical equipment for elevators must be waterproof. Here Otis electromagnets get a tar, pitch, and varnish treatment for 18 hours. Meanwhile, other parts, like . . .



2 Switches, made at Yonkers, N. Y., are assembled with other equipment onto panels. After assembly, electrical equipment is thoroughly tested. Special devices like . . .



3 Hinged controller handles are also used by Otis for operator control boards. These make accidental starts unlikely. In another Otis plant, at Harrison, N. J. . . .

FOLLANSBEE

POLISHED BLUE

The mirror-like finish of FOLLANSBEE POLISHED BLUE is the distinguishing characteristic of this superior steel sheet, one of the FOLLANSBEE SPECIALTY STEELS.

The mechanical and physical qualities of FOLLANSBEE POLISHED BLUE conform to the rigid requirements of design and production engineers. And, you can depend on the uniform blue, high gloss finish of FOLLANSBEE POLISHED BLUE to attract the attention of discriminating buyers.

Other products in the list of FOLLANSBEE SPECIALTY STEELS include:

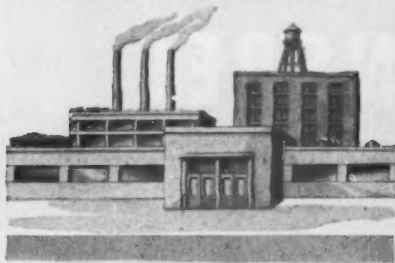
COLD ROLLED STRIP
ELECTRICAL SHEETS¹
SEAMLESS TERNE ROLL ROOFING

FOLLANSBEE STEEL CORPORATION
GENERAL OFFICES - PITTSBURGH 30, PA.

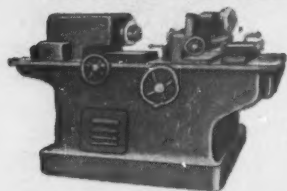
Sales Offices - New York, Philadelphia, Rochester,
Cleveland, Detroit, Milwaukee. Sales Agents - Chicago,
Indianapolis, St. Louis, Kansas City, Nashville,
Houston, Los Angeles, San Francisco,
Seattle, Toronto and Montreal, Canada. Plants - Follansbee, W. Va.,
and Toronto, O. Follansbee Metal Warehouses - Pittsburgh, Pa.,
Rochester, N. Y. & Fairfield, Conn.

KEEP YOUR SCRAP MOVING TO THE MILLS

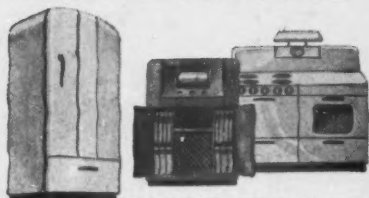
YOUR FACTORY



YOUR TOOLS



YOUR PRODUCTS



**Finished with the Quality
Finishes made by the world's
largest manufacturer**

SHERWIN-WILLIAMS

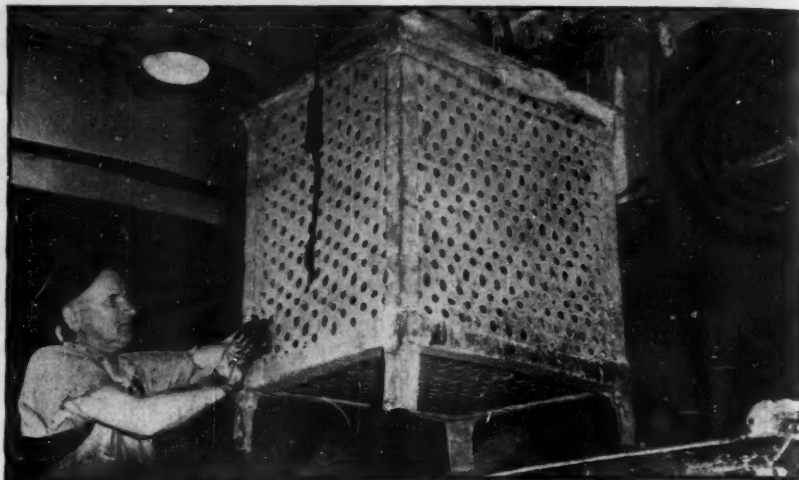
Your plant and everything in it can be coated with a fine finish developed by Sherwin-Williams to fit exactly the job you want.

Use of these S-W Industrial Finishes is the one virtually sure way to decrease maintenance costs, increase productivity (check S-W Color Harmony program), cut rejects, boost employee morale, get unsurpassed sales appeal! Write or phone for complete details on any paint problem or requirement you have. Get the job done quickly and perfectly with... The Sherwin-Williams Co., Industrial Division, Cleveland 1, Ohio. (Export Division, Newark, N. J.)

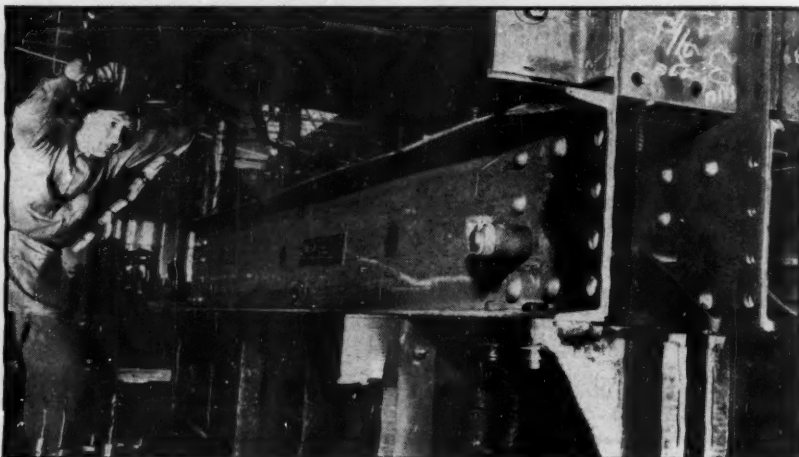


Products of
Sherwin-Williams
Industrial Research

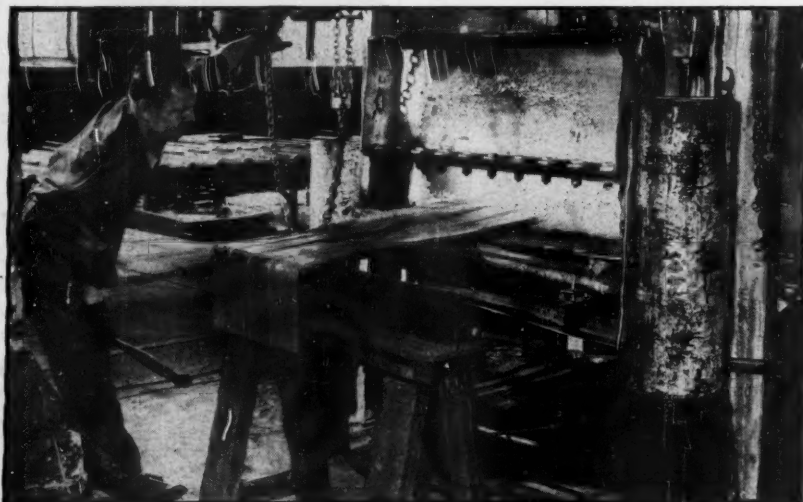
**SHERWIN-WILLIAMS
INDUSTRIAL FINISHES**



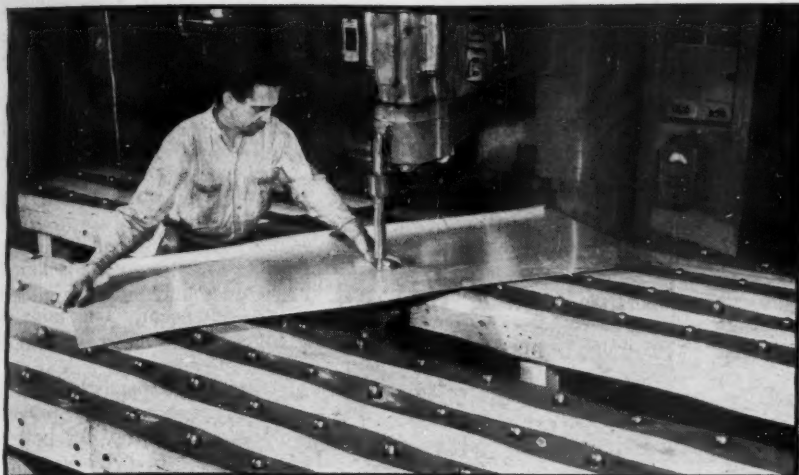
4 In a porous basket, iron castings get a special Parkerizing treatment that rustproofs the metal. Otis makes its own castings in a separate foundry. Metal working is also an important part of the Otis operation. For example, the . . .



5 Heavy steel members that make up the main support are machined on a big boring mill. Otis utilizes mass-production techniques; the side rails on which the car moves, for instance, are planed eight at a time. Other novel techniques include . . .



6 Heat-forming of steel strips for use as side rails. Before being bent to shape, they are heated up in this special furnace. Elevator manufacture also requires extensive welding for assembly of sheets. This work is speeded by devices like . . .



7 Ball-bearing tables. The balls are mounted in shallow sockets, let the workman swing the sheet around as it is being spotwelded. But elevators, besides having a frame, must have a floor. The platforms are tongue-and-groove hardwood. A surface made of . . .



8 Rubber tile in various colors is cemented in place. Assembly into a finished elevator actually starts with the floor section. In another part of the Harrison plant, sheet metal for the cab has been formed and welded, then spray painted. At this point . . .



9 Infrared lamps are used to dry the paint. This permits fast handling because the paint dries quickly. Actually . . .



10 Final assembly is done before painting. After assembly, elevators are knocked down again, painted and crated



CHAIN

for every need

- INDUSTRIAL • MARINE
- FARM • AUTOMOTIVE

**INTERNATIONAL
CHAIN & MFG. CO.**

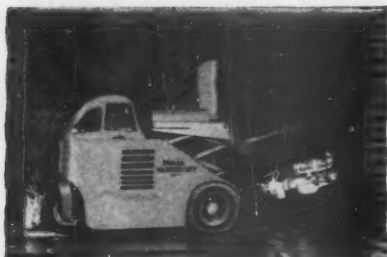
YORK, PENNA.

WAGNERMOBILE FOLDAWAY LIFT



Handles Tremendous Loads

The new Wagnermobile FOLD AWAY LIFT is not a small "warehouse type" lift truck. It has been designed to do all the materials handling jobs around a factory, airport, mine, dock, concrete block plant, smelter, railway, warehouse . . . any place heavy loads must be handled in tight quarters.



Handling of bulky, heavy loads inside freight cars, through narrow aisles, over rough terrain, through low doors is a simple matter with the FOLD AWAY LIFT. No stationary track to keep you out of "low clearance" places . . . entire 11 ft. of lift folds into machine like a bellows camera. Visibility entirely unrestricted.



FOLD AWAY LIFT easily handles 6000 lb. loads up to 8 ft. . . 4000 lbs. to 11 ft. Controls are 100% hydraulic throughout. Can be towed behind any pickup or truck. Attachments include $\frac{1}{2}$ and $\frac{3}{4}$ yard scoop, crane boom, lift fork frame, and fork tines.

Write for name of your nearest Dealer

Built by the Manufacturers of

MIXERMOBILE
TOWERMOBILE
TOWERMOBILE—CRANE
SCOOPMOBILE
DUO-WAY LIFT

MIXERMOBILE MANUFACTURERS

6855 N. E. Halsey Street
Portland 16, Oregon

New Packing Process Keeps Fruit Juice Flavor

Packing fruit juice without affecting flavor is a tough job. As a result, packers have been working on the problem for the better part of two decades.

• **New Approach**—Last week the packers were talking of a new approach. At Lake Wales, Fla., Citrus Canners Cooperative was turning out concentrated juice using a vacuum-evaporation process. The canned product, food experts agreed, was hard to tell from the juice of the fresh fruit.

Fruit for processing first has to be carefully selected. After the juice is extracted and strained by conventional methods, most of the air is removed by vacuum. The liquid is then piped to the first of three evaporator shells—part of the special equipment designed by Mojonnier Bros., Chicago.

• **Low Boiling Point**—In the evaporator, water from the juice boils off. A refrigerator simultaneously cools and condenses the water vapor under vacuum. This lowers pressure, and as pressure drops, so does the boiling point of the liquid. Thus, the juice can be concen-

trated by "boiling" at temperatures from 50 F to 70 F, saving food and vitamin values otherwise lost in normal boiling (212 F).

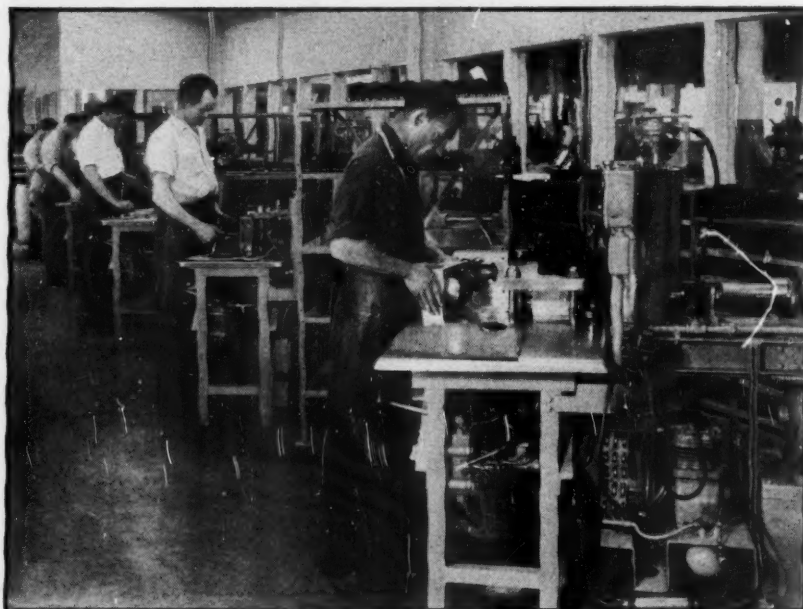
In successive stages in the evaporator shells, the solids content of the liquid is raised to: (1) 20%, (2) 40%, then (3) 60%. Steam ejectors at the top of the shell remove uncondensables from the vapor.

The concentrate is pumped from the last evaporator into ammonia-jacketed tanks. Fresh juice and pulp are added to restore original flavor. The juice is then frozen to a creamy slush and sealed under vacuum in cans.

• **Lower Costs**—In operation, power costs for the equipment have proved considerably less than those for boiler-run evaporator systems.

Government Publishes German Dye Secrets

In April, 1947, nine American experts began a study of the German dye-stuff industry. The data they collected have now been published in a three-volume report (PB-85172) by the Office of

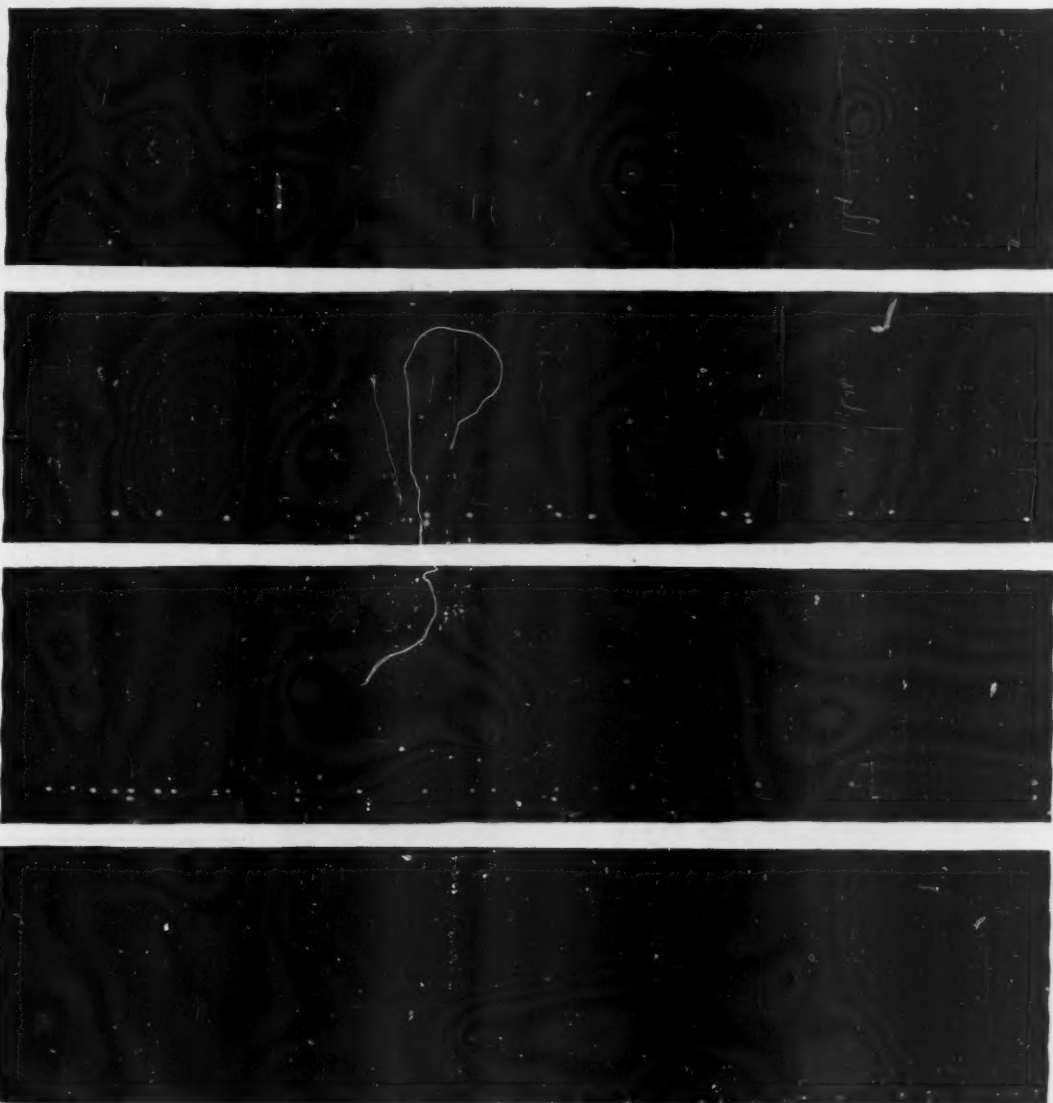


Wax Injector for Faster Casting

You can save manufacturing time with techniques like precision casting (BW-Jun.5'48,p48). And you can do it with special equipment too. In its new plant at Bayonne, N. J., International Nickel Co. has set up a line of trick machines that help speed the complex casting process. Their job: to make wax replicas of the master pattern. The first step is to clamp a mold together. Then the mold is locked in place against the machine nozzle with

hydraulic pressure. The same hydraulic circuit powers the cylinder that injects the molten wax—fed from a tank by gravity. Tiny heating cartridges keep the wax at the nozzle soft, so that when the mold is withdrawn the nozzle doesn't need cleaning. All operations are automatic once the mold is locked in place.

The plant, laid out for "mass" production of high-alloy parts (like turbine blades), was officially opened last week.



Recognize this view of a profit?

MONEY isn't always green. Sometimes it looks like colloidal zirconium oxide.

The pictures above, made by General Electric X-Ray diffraction, show structural changes which take place when this substance is heated. Reading from top to bottom, the chemist discovers that:

(1) The original material is non-crystalline, (2) heating changed it to crystalline, (3) the material changed from one structure to another over a certain temperature range, (4) crystal size increases as heating time is extended.

How important is this to management? So important that it offers *positive evidence* of what goes on in the solid state.

X-ray diffraction is a tool that does in the laboratory what often cannot be done otherwise. Knowledge it uncovers can be translated into profits. Can x-ray diffraction equipment serve in your factory? Let a General Electric Industrial X-Ray engineer discuss the idea with you. General Electric X-Ray Corporation, Dept. F-33, Milwaukee, Wisc.

GENERAL ELECTRIC
X-RAY CORPORATION

COOL workers come through!



YOUR OFFICE GIRLS stay on the beam when there's no heat to hamper their headwork. Watch how a well-placed R & M Air Circulator works wonders. Keeps 'em beautiful, better humored . . . and busy!



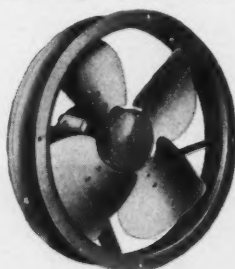
YOUR SHOP HANDS give you a bigger day's work when there are no beads on their brows. Get the jump on "summer slump" with those bargains in boosted hot-weather output — R & M Exhaust Fans.



YOUR EXECUTIVES, TOO, stay hot on the job when they're comfortably cool under the collar. For front-office men, there's nothing finer than a handsome, quiet R & M De Luxe Fan.



In 24" and 30" blades for ceiling, floor, wall, or bench mounting. From \$91.20, list.



In 12", 16", 20", 24", and 30" blades for high- or low-speed operation. From \$40.65, list.



In 10", 12", and 16" blades for desk or wall mounting. Oscillating. From \$24.35, list.

**ROBBINS
& MYERS**

Fans

Robbins & Myers, Inc., Fan Sales Division,
Springfield, Ohio; or Brantford, Ontario.
● Please send me R & M Fan Folder 3005
and the name of my nearest distributor.

Name _____
Firm _____
Address _____
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Free



Technical Services, Dept. of Commerce. Because time for the study was limited (April through June), the investigators tried to pick out data of most value to American industry. Their goal: sufficient information so that American chemists and engineers could either duplicate German developments or investigate them further with a minimum of effort.

Volume I of the report covers intermediate processes and analytical procedures; Volume II treats dyestuff processes and engineering data; the third volume deals with dyestuff research. Price for the set: \$15.

A. A. R. to Test Cars For Faster Freights

The Assn. of American Railroads is going to take a look at what can be done to make freight cars ride faster and smoother. This summer A.A.R.'s Mechanical Division, working with equipment manufacturers, will direct a program of laboratory and road tests on snubber devices and freight trucks designed for high-speed service.

The rolling laboratory of American Steel Foundries—five freight cars specially equipped to test riding qualities—



Rigged for Safety

Dravo Corp. has stressed safety in the design for this scaffolding on a bridge-construction job. Built as a part of the wood forms used to pour concrete, the scaffolds have handrail posts rigged at 135-deg. angles. Space between the rails is covered with wire mesh to keep tools—and workmen—from falling. Instead of ladders, tower stairways with handrails are used for trips up and down. The bridge when finished will stretch 1,931 ft. across the Monongahela River near Pittsburgh.

will be used to compare existing trucks and snubbers with the new designs. Proving ground for the road tests will be a 674-mile stretch of track on the Illinois Central R.R. In the tryouts on the new freight-car trucks, speeds will range from 65 m.p.h. to 90 m.p.h. The trucks will carry loads ranging from 60,000 lb. to 169,000 lb.

ZIRCONIUM IN PRODUCTION

Commercial production of the new metal zirconium has been largely experimental (BW—Feb. 28 '48, p. 58). Now a way has been found to manufacture pure ductile zirconium into bars, sheets, and wire. Foote Mineral Co., Philadelphia, perfected the process.

Though sheet sizes are limited, the company has a way to weld the lightweight metal. Thus, liners, tubing, and other shapes can be fabricated.

Zirconium, a refractory silicate or oxide, is still hard to free by the usual commercial reduction processes. A piece the size of a postcard sells for about \$5. The principal application up to now has been in vacuum tubes where the metal is a gas absorber when heated red hot.

DOW MAKES TRUCK PARTS

Dow Chemical Co. has taken on the manufacture of magnesium sheets and special shaped extrusions for lightweight truck bodies. The extrusions—for 9-ft., 12-ft., 14-ft., and 16-ft. body sizes—will be the same as those that have been marketed by Revere Copper & Brass, Inc. Revere recently pulled out of the magnesium fabrication business.

In addition to the special shapes, Dow says it will carry a full line of standard extrusions priced at some 28% below previous figures. Sheet prices will stay close to former quotations.

P. S.

Shell Chemical Corp. is building the first unit of what may become a complete plant to make oil-derived synthetic detergents. The company, a subsidiary of Shell Oil Co., Inc., will make an intermediate chemical for detergents in the new unit. Construction is at Wood River, Ill.—part of Shell's expansion in the St. Louis area.

General Electric Co. has drawn up a chart showing latest data on isotopes of the chemical elements. Copies are going out to colleges and laboratories; you can get one free by writing to the company at Schenectady 5, N. Y.

Union Bag & Paper Corp. has designed a machine to pack mineral-wool insulating material in paper bags automatically. The original model has been at work in National Gypsum Co.'s Mansfield (Mass.) plant. Other machines will soon be ready for market.

H & D BOXES

DEVELOPED
as a family group



EASY
to display

These corrugated packages reduce distribution costs, increase dealer good will, influence customer acceptance. They protect the merchandise in transit, are easy to pack, simplify inventory, save space, display well, facilitate identification and selection, lend themselves to successful merchandising, effectively promote the manufacturer's name. Yet, with a package designed to make a good product better. Consult the H & D Package Laboratory on All packaging problems.

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H & D

Authority on Packaging

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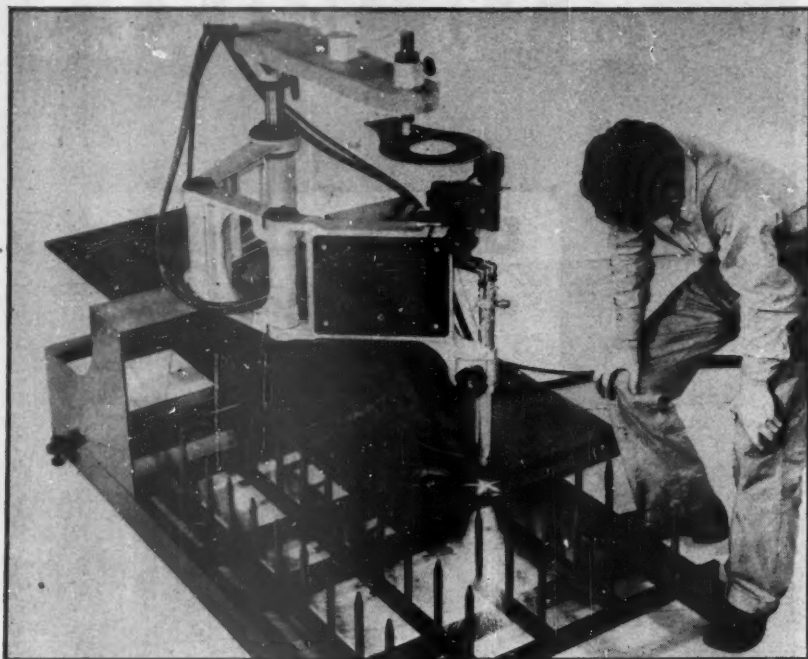
STONEBROOK, N. Y. • WASHINGTON, D. C. • KANSAS CITY

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NEW PRODUCTS



Steel-Slicer

Metal parts can be produced to any contour on a flame cutting machine manufactured by Ohmstede Machine Works, Beaumont, Tex. Model SC-42 can be set up with a plywood template for small runs; for production quantities a steel template is used. Magnetic tracing duplicates the shape of the template in the cutting.

All controls for the machine are centralized on a single panel. Motor speed is varied by rheostats; cutting can be done at speeds from 3 in. to 30 in. per min. Oxygen and acetylene reach the torch through a hose from a block at the rear of the machine. Most moving parts are permanently lubricated; antifriction bearings are used in the aluminum-alloy arms. The machine, according to Ohmstede, will handle a wider range of work than the company's previous models. • Availability: immediate.

No-Shift Oil

An improved hydraulic fluid for torque converters (BW-Jan.17'48,p21) has been announced by Socony-Vacuum Oil Co. Already tested in a number of bus fleets, Mobilfluid 62 is said to have high chemical stability and resistance to oxidation. The company says the fluid has kept converter parts and supplementary hydraulic circuits free of deposits for thousands of miles of service.

The fluid is light-bodied, is processed to safeguard against rusting and foaming. It keeps its fluidity at temperatures

down to -40 F. The company is at 26 Broadway, New York 4.

• Availability: immediate.

Metal Washers

Two cleaners for use on a variety of metals and alloys are in production at Calgon, Inc., Hagan Bldg., Pittsburgh. Calgon Metal Cleaner No. 21 is a dry granular alkaline detergent for spray-cleaning in metal-washing machines; Calgon Emulsion Cleaner is used with the metal cleaner for immersion cleaning in dip tanks and for heavy-duty spray cleaning.

Recommended concentrations for the metal cleaner range from 1/4 oz. to 2 oz. per gal. of water. Calgon reports that a glassy sodium phosphate in the detergent prevents the building up of lime scale or other deposits caused by water hardness. Designed primarily for steel products or parts, the cleaner also works on aluminum, other metals and alloys.

The emulsion cleaner, a white creamy suspension of an organic solvent in water, disperses quickly when added to a cleaning bath. It can be rinsed easily from the metal surface, Calgon says, with either hot or cold water. It leaves no trace of solvent or other film.

• Availability: immediate.

Flow Speedometer

Finding out how fast a liquid flows can be done automatically by weighing the fluid in a device developed by Engineering Research & Development Co., Hinsdale, Ill. The Automatic Liquid

Balance measures the time it takes for a given quantity of liquid to flow through a jar by balancing the fluid against a calibrated weight.

Once switched on, the entire measuring operation is automatic. Among the advantages cited for the system: no fluid waste; no carryover when liquids are changed; reduced fire hazard with inflammable liquids; precision accuracy in measurement.

Originally designed to measure the flow of fuel into internal combustion engines, the device will also record lubricating oil, coolant, alcohol, and acid flow.

The weighing section is mounted in a hardwood cabinet with a removable glass door. The cabinet is 24 in. high, 18 in. wide, 9 in. deep. The panel of the separate control unit is 9 1/2 in. by 13 1/2 in. An electric stop clock or counter can be added to the control unit.

• Availability: 60 days.

Two-Fuel Burner

When winter cold snaps pinch gas supplies, homeowners can switch over automatically to oil heat with a burner manufactured by Normal Products Co., 1150 Chesapeake Ave., Columbus, Ohio. The Twinfuel conversion unit has a sealed outdoor thermostat that is set slightly above the temperature that represents peak load in the area for the local gas company. When temperature drops below this setting, the burner switches over automatically from gas to oil; when the weather breaks, the burner goes back to gas.

The burner works on natural, manufactured, or mixed gas, or No. 1 or No. 2 fuel oil. Minimum B.t.u. output is 39,200 an hour.

• Availability: 30 days.

Two Home Appliances

Singer Sewing Machine Co. has added two more appliances to its line of home equipment: a new vacuum cleaner and an iron.

Main features of the cleaner: twin fans to increase cleaning suction; cord control (the electric cord winds up inside the handle); automatic adjustment of cleaning brush to the thickness of the rug. The machine, a standup model, weighs slightly more than 17 lb. The handle can be adjusted so that the machine can be hung on a closet hook. It projects only 5 in. from the wall. Aluminum and steel are used in structural parts; the bumper is of Vinylite plastic.

Singer's iron works just as easily for left-handed pushers as it does for right-handers. For southpaws, a simple adjustment switches the cord's position. A metal spring that clamps on the ironing board to keep the cord from drag-

"Hybrid Metallurgy"

IMPROVES ON NATURE, TOO!

The wonders wrought by scientists in agriculture, horticulture and animal husbandry have become commonplace. By cross-breeding plants and animals they have given us grapefruit, hybrid corn, heavier hogs and cattle, hundreds of marvels which Nature alone cannot produce. Equally marvelous, but not so well known, is the work now being done in metals. Fansteel metallurgists, using powder metallurgy and other techniques far beyond simple alloying, are producing "hybrid" metals which enhance desirable properties and suppress undesirable characteristics to almost any desired degree.

For example, there are Fansteel metals which combine the hardness, strength and arc-resisting properties of tungsten and molybdenum with the high conductivity of silver or copper. Another, Fansteel 77 Metal, has most of the high density of tungsten, but is easily machined into flywheels, governors for rotational control, radiation shields and other parts.

Still other Fansteel metals have remarkable resistance to corrosion, wear, heat and impact.

Why not tell us the properties you need? We may have a metal for your exact requirements which we can fabricate to your specifications.

Fansteel Metallurgical Corporation, North Chicago, Illinois.

PURE METALS

Tungsten, Molybdenum, Tantalum and Columbium in sheet, rod, wire and special shapes and parts.

POWDER METALLURGY PRODUCTS

Finished or semi-finished shapes and parts of special analysis to achieve high strength, density, electrical conductivity, resistance to wear, impact, heat, erosion, or combinations of these and other properties.

COPPER BASE ALLOYS

Copper alloyed with other elements, to combine high conductivity with strength, elasticity, resistance to heat, impact or wear. Available in bars, rod, sheet, strip, castings, forgings, finished or semi-finished parts, for electrical hardware, current-carrying springs, resistance welding electrodes, dies and fixtures.

* Fansteel

AN INDUSTRY THAT SERVES INDUSTRIES



OSBORN BRUSHES

serve as powder puffs
in Goodyear production line



INDUSTRIAL powder puffs—that's the function of these Osborn power driven rotary brushes at the Goodyear Tire & Rubber Co., Akron, Ohio.

As the uncured tire stock leaves the extrusion machines, a soapstone talc is blown on both sides of its "tacky" surface (note inset) to permit material to be stacked and handled without sticking. But application by blowing alone results in both spotty coverage and waste of soapstone.

And that's where Osborn Brushes take over. Acting as giant powder puffs, these horse-hair rotary brushes (shown in main illustration) spread a thin, uniform layer of soapstone over the entire surface and remove

the excess which is salvaged for later use.

Brushes formerly used for this job had a wood core which was subject to splitting and warping. The Osborn Brush with a steel center section eliminates these difficulties, permits a more uniformly filled surface of just the right stiffness and fullness to give a uniform spreading action.

Whether it is a cleaning, finishing, roughing or polishing operation, the right brush properly applied can save you time and money. Let an Osborn sales engineer show you how power driven brushes can be installed in your production line—at a profit. For complete information, write—

THE OSBORN MANUFACTURING COMPANY

5401 Hamilton Avenue

Cleveland, Ohio



WORLD'S LARGEST MANUFACTURER OF BRUSHES FOR INDUSTRY
POWER DRIVEN BRUSHES • PAINT BRUSHES • MAINTENANCE BRUSHES

ging across the ironing is optional equipment.

Both products are sold through Singer Sewing Centers. The company address: 149 Broadway, New York.

• Availability: immediate.



High-Speed Reader

Speed and simplicity are the features stressed by Remington Rand, Inc., in its motor-driven microfilm reader. According to the company's Photo Records Division, even a green operator can load the Film-a-record Reader-Desk and locate any image on a 100-ft. roll in less than a minute.

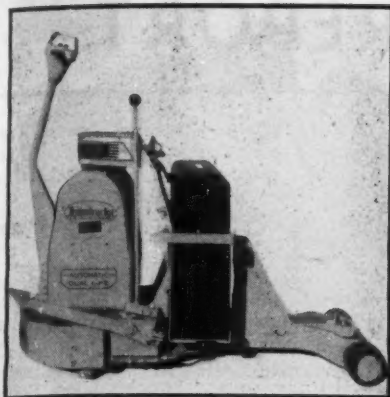
Film can be moved through the Reader-Desk in either direction as fast as 150 ft. a min.; it stops instantly when a single control knob is turned. Loading, focusing, and positioning are all done in a recess at the bottom of the screen. The 14-in. by 14-in. screen will enlarge documents 23 diameters to original size or larger. One electric motor drives and controls the unit. Rand's Photo Records Division is at 315 Fourth Ave., New York 10.

• Availability: July.

Electric Muscle

Electric power takes over the hauling of live and semilive skids (load platforms on wheels or wheels and legs) in a new Transtractor industrial truck. The maker: Automatic Transportation Co., 149 W. 87th St., Chicago.

The new unit is built around the chassis and driving unit used on Automatic's platform and pallet trucks. It has trailing wheels and a lifting arm mounted on a specially designed rear-end frame. The trailing wheels are placed so that they go between the legs or wheels of the skid. By putting the lifting arm slightly forward of these



trailing wheels, Automatic says, the truck has full traction when lifting heavy loads. For example, the company points out that a 4,000-lb. load actually adds 60-lb. traction to the drive wheel.

The lifting arm and trailing-wheel assembly are built to the specification of the skids to be handled. The truck has a foot pump that combines a low-pressure (high-speed) hydraulic cylinder for raising the lifting arm into contact with the skid and a high-pressure (low-speed) cylinder for raising the load. An electric lift can be had as optional equipment.

• Availability: 30 to 60 days.

P. S.

Easy-to-install motor mount is made for $\frac{1}{4}$ -hp. and $\frac{1}{2}$ -hp. capacitor motors by Lord Mfg. Co., Erie, Pa. Built in one piece, the mounting goes on without bolts, nuts, straps, or special tools. According to Lord, it isolates most torsional vibration.

Electronic hearing aid, the Hearette, works with no "strings" attached. The user simply holds it to his ear. A microphone, A and B batteries, two special vacuum tubes, a transformer, resistors, a capacitor, and volume control are built into the 8 $\frac{1}{2}$ -oz. unit. The maker: Dictograph Products, Inc., Acousticon Division, 580 Fifth Ave., New York.

Folding aluminum-alloy ruler is built without the usual spring joints. There are no protruding edges, so the ruler can be used as a straightedge. Calibrated on both sides, it has 1/16-in. depressed black scales and numerals. Alfred Robbins Organization, Inc., 136 W. 54th St., New York 19, is the manufacturer.










A noise suppressor developed by H. H. Scott, Inc., 385 Putnam Ave., Cambridge, Mass., can now be had in a small unit (12 in. by 15 in. by 8 $\frac{1}{2}$ in.) for installation in a bookcase or cabinet. The suppressor cuts out scratch, rumbling, and background noises in the reproduction of records or radio programs. Earlier units were for broadcasting stations or were built into expensive radio-phonographs (BW—Jan. 4'47,p42).

NEW the first CLEARSITE* vials in featherweight, non-shattering LUSTRON



NEW Here's the very latest in plastic containers! Molded in Lustron, these all-new vials and containers by Celluplastic Corp. take full advantage of the unique properties of Monsanto's famous polystyrene:

These new vials will be used by the millions for efficient packaging of drugs, cosmetics, pharmaceuticals, foods, confections, condiments, novelties, machine parts, etc.

 70% LIGHTER THAN GLASS CONTAINERS	 NON-SHATTERING, SEAMLESS, SAFE	 NO TASTE, NO ODOR
 ROUND, SQUARE, OVAL—OTHER SPECIAL SHAPES	 ALL CLOSURES: SCREW, PLUG, FRICTION	 ALL COLORS: SPARKLING CRYSTAL CLEAR, GEM-LIKE COLORS, TRANSPARENT, OPAQUE AND MOTTLE
 UNIFORMITY: DIMENSIONAL STABILITY, FLAT NON-ROCKING BASE	 RESISTANCE TO ACIDS, ALKALIES, HUMIDITY	 IMPRINTED IN PROCESS OF MANUFACTURE IN MULTI-COLORS

In savings in shipping weight, bulk packing, and breakage, these new containers will pay their own way from the start, package engineers point out. Production men like Clearsite's uniformity for fast, uninterrupted line production. Sales managers point out the extra plus factors of transparency, color and safety. For full information on these vials address Celluplastic Corporation, 50 Avenue L, Newark 5, N. J. For full information on Lustron for your business, use the coupon below. *Reg. U. S. Pat. Off. by Celluplastic Corporation. Lustron: Reg. U. S. Pat. Off.

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MONSANTO CHEMICAL COMPANY, PLASTICS DIVISION
DEPT. WBP6, SPRINGFIELD 2, MASS.

Please send me more information about Lustron for my business.

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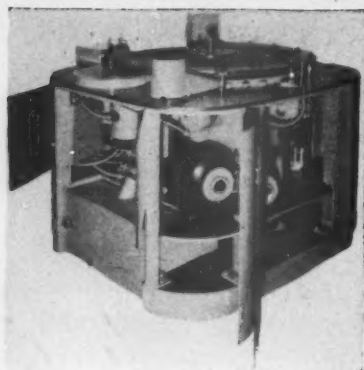
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SERVING INDUSTRY . . . WHICH SERVES MANKIND

SPECIAL PURPOSE MACHINES



Can SHRINK Your Costs

To cut costs, speed production and insure product uniformity, Black Industries designed and built this special rotary indexing machine that trims, drills and grooves metal condenser containers. It is typical of many designed and built recently — including machines for automatic hard surfacing of valve seats, — for battery cell loading, — for conveying chemicals, — for tinning metal strip and for many other automatic operations, both single and progressive.

Black Industries' design engineers will quickly grasp your problems — will design a special purpose machine to give the end results you require . . . And the actual building of the machine in our own complete modernly equipped plant is your guarantee of its steady cost-cutting performance.

Outline your needs in a letter. Let us supply the help that only "Specialists in Special Purpose Machines" can give.

Write for Illustrated Bulletin.

BLACK INDUSTRIES
1406 E. 222nd St. • Cleveland 17, Ohio

Specialists in Special Purpose Machinery

READERS REPORT:

VA Insurance Refunds

Sirs:

Am very interested in your article on "Insurance, the VA's Problem" [BW—May 15'48, p52].

Several of us have discussed this article with particular reference to contemplated dividends. Please tell us if such dividends will be paid to holders of term insurance, and if possible, if they will be paid to former holders of term insurance. Further, what is generally considered to be their likely basis of distribution; that is, will dividends be paid in proportion to total payments made by the policyholder?

W. M. FICKLEN

CHAMBER OF COMMERCE &
MERCHANTS ASSN., INC.,
SHELBY, N. C.

• The first contemplated dividend will be paid to all holders of term insurance, whether or not the insurance is now lapsed. However, as we pointed out, it isn't likely that this dividend will be paid until sometime next year. Two factors will determine the basis of distribution: (1) the amount of premiums paid by the policyholder, and (2) the casualty rate in various age groups. That is, they will compute the mortality experience in each age group, and policyholders will share proportionately. That means that a veteran who took his policy out at the age of 19 or 20 will stand to collect somewhat more than a veteran who took his out at about the age of 30.

Rail Union Politics

Sirs:

You comment on what you are pleased to term presidential and union politics [BW—May 15'48, p16]. Statement that Trainmen have been raiding A. F. of L. Switchmen and Robertson's Enginemen Brotherhood is false and malicious, since Brotherhood of Railroad Trainmen represented switchmen before A. F. of L. entered the field, and now represents more than 80,000 switchmen in service of American railroads.

Brotherhood of Railroad Trainmen does not have an engineman in its organization, has never solicited enginemen and its laws prohibit their admission. Hence, your deductions that enginemen organizations felt forced to hold out for more than conductors and trainmen settled for, is unsupported.

Your reference to the Truman-Whitney meeting is unsupported by the facts. No mention was made by Mr. Truman

or me of labor feud or politics, and no promises were exacted by either of us.

A. F. WHITNEY

PRESIDENT,
BROTHERHOOD OF RAILROAD TRAINMEN,
CLEVELAND, OHIO

• We have checked with officials of the Brotherhood of Locomotive Firemen & Enginemen and the Brotherhood of Locomotive Engineers. They reiterate that the Brotherhood of Railroad Trainmen does have enginemen as members. They cite as instances of this (1) the taking in by B.R.T. of entire crews during the war in companies with only a few crews, and (2) the Pacific Electric situation where employees are interchangeable from trainmen to enginemen.

As for switchmen, we recognize that B.R.T. has long represented this group of railroad workers and does, in fact, have most of these employees among its membership. We take it, however, that B.R.T. is not unwilling to accept any of the rest of the switchmen who might care to transfer from the Switchmen's Union of North America (A.F.L.).

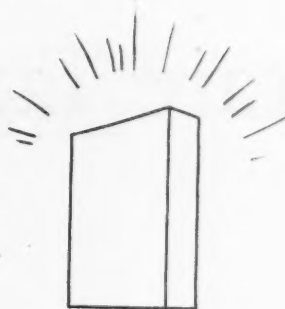
As for our comments on the Whitney-Truman meeting, we have rechecked the government officials who originally told us the gist of what we reported. They stand on their story.

We wrote to Mr. Whitney making the above points. He replied as follows:

Sirs:

. . . Your statement that the B.R.T. has admitted entire crews to membership is in error. As to the Pacific Electric, the employees of this company that belong to the B.R.T. hold seniority as brakemen and conductors, and the B.R.T. represents this class of employees. It is true that many of these employees hold dual rights, and the engineers' and firemen's organizations have a perfect right to represent them if and when such employees so indicate by a representation vote held under the provisions of the Railway Labor Act. However, an overwhelming majority of these employees by their personal votes have authorized the B.R.T. to represent them; hence, I think the article appearing in Business Week to the effect that the B.R.T. was raiding the membership of these organizations is wholly unwarranted.

As to your reference to the switchmen, the B.R.T. would of course be obliged to represent switchmen members of the S. U. of N. A. If they executed a representation vote under the Railway Labor Act, and should the



Make more eyes reach
for your product...
in cartons of Coated Lithwite*

Many famous products are getting an eye-catching display advantage in folding cartons of Coated Lithwite ...the quality clay-coated board, plus!

RIGHT NOW, many a sales department really has *its sleeves rolled up*. Chances are, *yours* is one of them. You're looking for every way to get a break over competition.

Cartons of Coated Lithwite can give you one, an important *eye-catching* break—where it counts most—right on the dealer's shelf and counter.

For this revolutionary clay-coated board (the clay-coating is filmed on with mechanical uniformity in one straight-through operation) is unusually white and bright. Its surface is chalk-free, velvet-smooth. Colors come up brilliantly on cartons and packers of Coated Lithwite. Product pictures reproduce with a sharp, "reach-for-me" realism.

Gardner-Richardson's Precision-Engineered craftsmanship means better filling machine performance, too, less waste, fewer jammers and leakers, less down time. Worth investigating, isn't it? Write. We'll send a representative with complete facts.

Ask us to DESIGN more sales into your package

Want us to face-lift an old package design? Design a brand-new package with greater display value, shelf appeal, utility? Do you have something new that's never been packaged before? Gardner-Richardson's team of designers, artists and craftsmen will be glad to tackle your problem on a strictly "show-you" basis, without obligation. Write, today.

THE GARDNER-RICHARDSON CO.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

*Reg. U.S. Pat. Off.

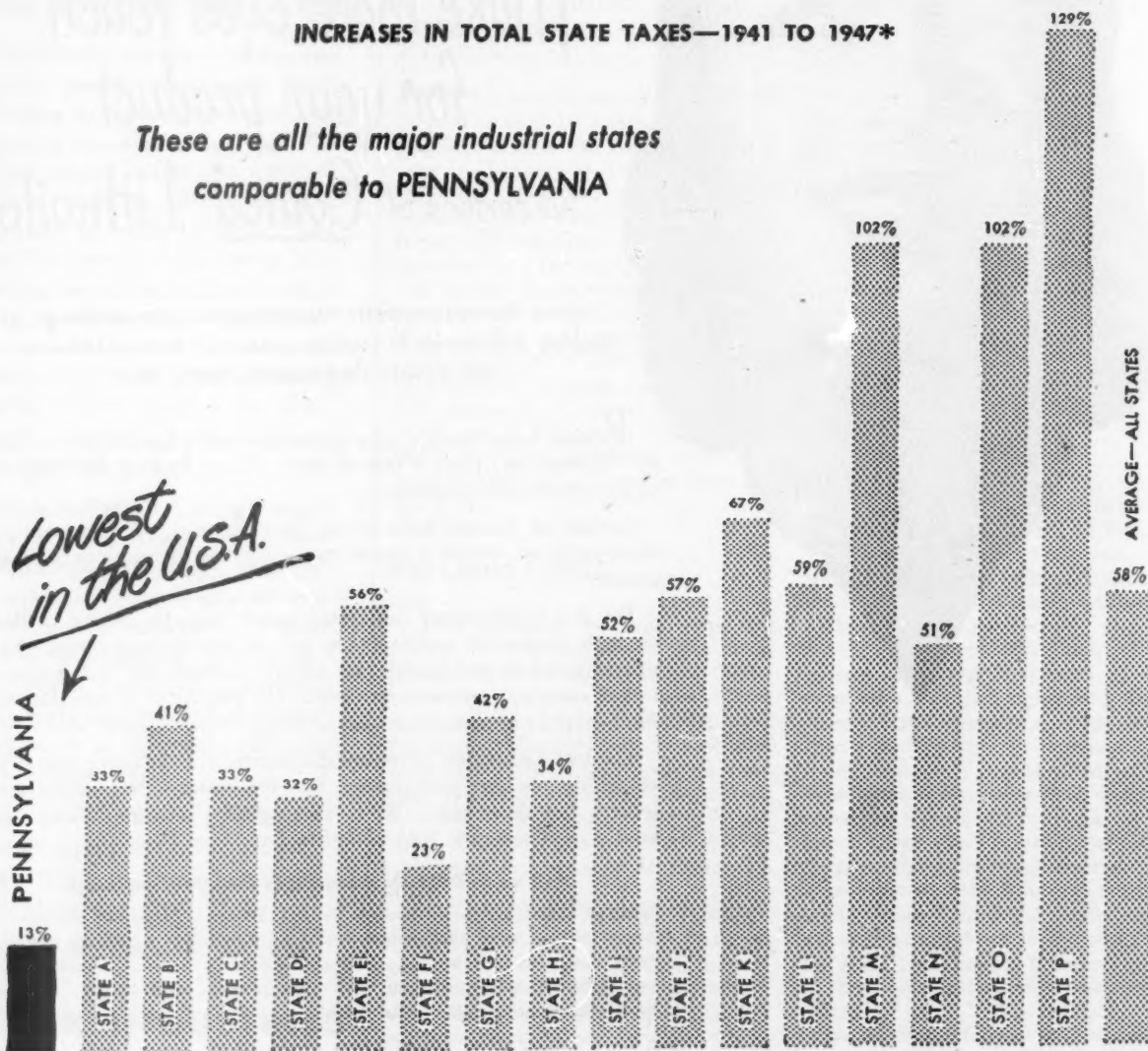
Sales Representatives in Boston, Chicago, Cleveland, Detroit, New York, Philadelphia, Pittsburgh, St. Louis

Independent study by THE TAX FOUNDATION shows:

State Taxes have gone up *than in any*

INCREASES IN TOTAL STATE TAXES—1941 TO 1947*

These are all the major industrial states
comparable to PENNSYLVANIA

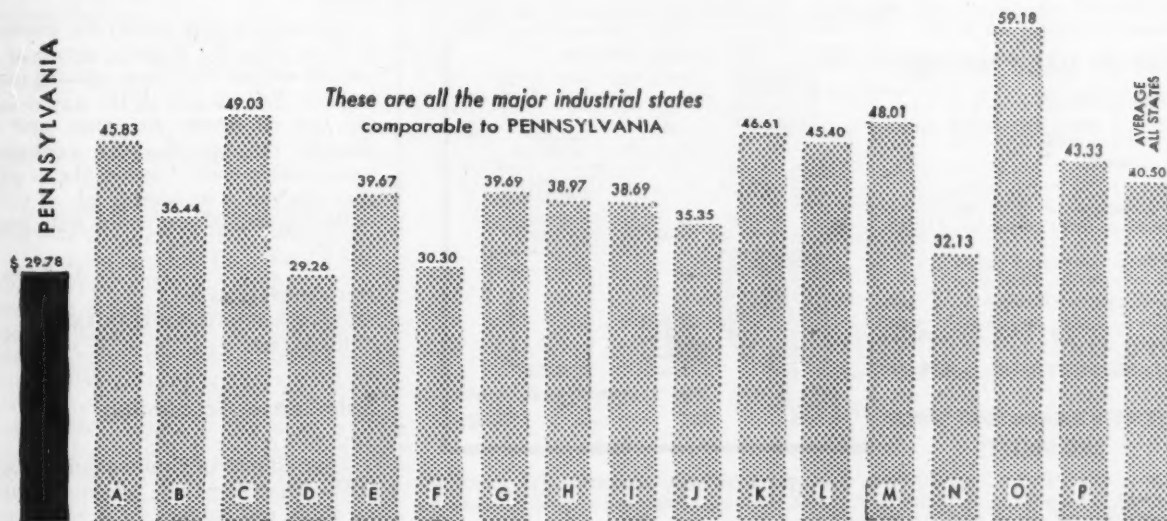


35 States reported increases of 50% or more. Of these, 12 showed increases of 90% or more. One State raised its taxes 148%.

*The Tax Foundation's study purposely excluded unemployment compensation taxes. (Pennsylvania has a very favorable merit rating system on unemployment compensation.)

less in Pennsylvania *other state!*

TOTAL STATE TAXES PER CAPITA—1947



In addition to this favorable picture on total State taxes, Pennsylvania has a small public debt compared to most other large industrial States, and has one of the low ratios of State employees to total population.

The Tax Foundation of New York, an independent, non-profit research organization, has just issued a 99-page report entitled, "Recent Trends in Major State Taxes—1941 to 1947." It reveals many amazing facts about the relative tax burden in various parts of the country, two of which are shown in these charts.

Among other things it shows that Pennsylvania is one of the lowest tax States in the nation. The manufacturer with a plant in Pennsylvania has a great tax advantage over his competitors in many other States.

Besides, Pennsylvania is located in the Heart of the World's Greatest Market, with over \$73,000,000,000.00 of net buying income within a radius of 500 miles.

Locate one of your plants in the midst of these favorable circumstances.

COMMONWEALTH OF Pennsylvania

HARRISBURG

JAMES H. DUFF, *Governor*

ORUS J. MATTHEWS, *Secretary of Commerce*

Department of Commerce
Commonwealth of Pennsylvania
Harrisburg, Pa.

Please send your folder on results of tax survey report.

Name _____ Title _____

Organization _____

Address _____

HOW A BAKER TRUCK

CAN CUT A
\$38.33 Handling Cost to 59¢



Most material handling problems consist principally of two fundamental operations—(1) Transportation, and (2) Piling. The following simple example shows how a handling operation, costing \$38.33 by hand methods, can be cut to 59¢ by the use of BAKER Fork Trucks and pallets.

THE PROBLEM—To move a pile of 1000 cases a distance of 200 feet and re-pile. This problem is obviously oversimplified. In practice these operations are repeated many times and with many variations—but the ratio of savings remains essentially the same.

COST BY HAND METHODS

1. Transporting—Practical Load—1 case. Estimated walking speed 200 feet per minute.

Time—1000 round trips, 2000 minutes or 33.33 hrs. Labor cost at \$1.00 per hr., \$33.33

2. Piling—Estimated rate—200 cases per hr. Total time—1000 cases—5 hours.

Labor cost at \$1.00 per hr., 5.00

TOTAL COST—HAND METHODS . . \$38.33

COST WITH BAKER FORK TRUCK AND PALLET

1. Labor Cost—Pallet load—50 cases. Time per round trip with truck 1.2 min. (includes picking up pallet load, travel, tiering, and turning around.) Total time—20 round trips 24 minutes or .4 hour.

Labor Cost (Operator at \$1.00 per hour.)40

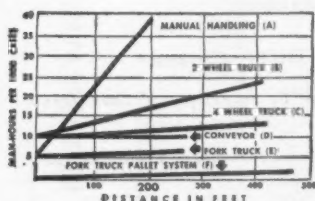
2. Truck Cost—Annual cost—owning and operating Fork Truck and Pallets \$980.00

Per hour cost (2000 hours per year.) 49¢.

Cost for .4 hours196

TOTAL COST—WITH TRUCK596

TOTAL SAVINGS—\$37.73 or 98.5%



Let a Baker Material Handling engineer show you how similar savings can be made in your plant.

BAKER INDUSTRIAL TRUCK DIVISION
of The Baker-Raulang Company
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Baker INDUSTRIAL TRUCKS

B.R.T. refuse to represent such men it would find itself in court as we would have no right to decline to accept their membership. The technical federal and state laws now in existence require the railway labor organizations to do many things that they were not formerly required to do. Some of these laws have resulted in bad blood between the organizations, and in my opinion are wholly unnecessary—but that has nothing to do with the facts in the matter.

A. F. WHITNEY

Accurate . . . Sensible

Sirs:

I think your article on the North Western [BW—May 1948, p86] is one of the most informative on this railway system that has been written in many years. I want to commend you particularly for the accuracy of the statistical matter.

It is not an easy matter for anyone to write about the financial details of a railroad without sometimes running into trouble. You clicked all the way down the line on figures and facts, and I thought the opinions you expressed were sensible ones. I would like to add that you did a wonderful job of concentrating a 100-year story into your article.

F. V. KOVAL

ASST. TO PRESIDENT,
CHICAGO & NORTH WESTERN RY.,
CHICAGO, ILL.

Sale-Lease Accounting

Sirs:

Your editorial, "Information Please" [BW—May 8'48, p124], deserves, and no doubt will receive, the most earnest consideration of accountants and investors. Neglect or failure to reflect on balance sheets long-term, noncancelable lease commitments resulting from "buy-build-sell-lease" practices may well result in misstatement of financial condition of certain companies and exposes a weakness in current accounting practice.

It must be recognized that accounting is not a body of logic but a body of conventions, like a language; it is necessary that those conventions, or generally accepted accounting practices, be kept up to date to reflect changing conditions in the business world.

That this matter is being considered, or at least has been brought to the attention of the public accounting profession, is evidenced by an article on the same subject in the April issue of the Journal of Accountancy, official organ of the American Institute of Accountants. In that article you will note that I credited your excellent publication as a source of some of my information.

I don't think you are quite right in saying that sale-lease financing "makes it look as though the company has fattened its assets without increasing its liabilities." What has happened is a change in form of some assets, from fixed plant to cash or current assets, as a result of the sale. The liabilities assumed but not shown are those arising from the lease commitments; there may also have been other previous liabilities paid off from proceeds of the sale.

It would be a better description to say that whole groups of assets and liabilities—the leasehold and the lease obligations—are lifted bodily out of the balance-sheet. Both assets and liabilities are understated, as a result essentially of a change more in form than in substance.

You are entirely right in regarding the sale and lease as one transaction, and in urging that investors be informed thereon.

ARTHUR M. CANNON
UNIVERSITY OF WASHINGTON,
SEATTLE, WASH.

Disulfide Manufacture

Sirs:

One item in your article on "What's Doing in Chemistry" [BW—May 1'48, p46] took my eye more than it did when I saw the program of the meeting of the American Chemical Society. I did not hear the paper by Siller, of New Jersey Zinc, on carbon disulfide . . . The statement in BW that the process is cheaper is what took my eye. I was induced to look up the abstract of the paper, and found a discrepancy: It says the process involves sulfur dioxide, not elemental sulfur; and anthracite coal, not "a reactive form of carbon."

T. H. CHILTON
WILMINGTON, DEL.

• Reader Chilton is correct; the new process does use hard coal and sulfur dioxide.

Porcelain Buildings

Sirs:

With reference to your report on porcelain buildings, your attention is called to the fact that prior to 1936 Davidson Enamel Products Co. of Lima, Ohio, built a number of easily assembled porcelain-enameled steel structures under the patent of Philip M. Jullien filed in March, 1937, resulting in U. S. Pat. 2227452. These designs were very successful and, according to Mr. Jullien, were equally suitable for residences, hamburger stands, or office buildings. All of the eight structures are still in existence and show no evidence of deterioration.

E. A. BURROWS
WASHINGTON, D. C.

BUSINESS WEEK • June 19, 1948



NEW! Paper drinking cup makers and producers of similar types of food containers have successfully tested CUP-SEAM — a new Resyn* adhesive that is highly water resistant and able to withstand contact with both hot and cold liquids for a prolonged time without leakage.

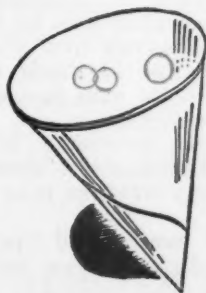
CUP-SEAM has been acclaimed with unusual enthusiasm after months of field usage. It is a white emulsion that dries to a clean, colorless film. It is odorless . . . free from solvents . . . non-toxic.

CUP-SEAM has been tested on regular equipment at high speeds. It has excellent machineability . . . is quick tacking, fast drying, non-staining . . . has a bonding strength that exceeds that of the paper. Yet, its film flexes as easily as the paper it bonds.

CUP-SEAM— which seals liquids out as well as in — is now in full supply ready for immediate and steadily maintained deliveries.

* ©

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MARKETING

STEEL MILL SHIPMENTS



83.4% → Direct

16.6% →



Warehouse

CUSTOMERS



35,000



300,000

© BUSINESS WEEK

Data: American Iron & Steel Institute

HOW STEEL IS DISTRIBUTED: Warehouses are getting a healthy chunk of total shipments, but . . .

Steel Warehousemen Have Uneasy Prosperity

Their slice of business is at new high, and turnover is fast. But there are competition, price, and customer headaches.

More steel is moving from mills to customers through warehouses than ever before. In 1947, mills shipped 10,484,000 tons—16.6% of total shipments—to warehouses. This tonnage was an increase of 57% over mill-to-warehouse shipments in 1940; mill shipments to all customers in the same period rose only 38% (BW—May 3 '47, p42).

And there are now some 300,000 customers on the warehouse books—a new high.

• **Rebuttal**—Since warehouses primarily serve smaller users, steelmen might have used these figures last week as an answer to Sen. Kenneth S. Wherry. Wherry, chairman of the Senate Small Business Committee, claimed that the smaller customers aren't getting their fair share of steel produced. Warehousemen will tell anybody who will listen that the steel is coming from the mills all right—but there are just too many customers, and would-be customers.

Not only the warehouseman, but everybody in the industry, is feeling the supply pinch caused by: (1) the huge

postwar construction and expansion programs; (2) the still unsatisfied consumer-goods demand; and (3) production losses caused by strikes.

• **Quick Turnover**—The warehouseman isn't worrying much about business this year. Besides a record supply and a crying demand, he can cheer about the fast stock turnover. It's estimated at less than 10 days, which beats the turnover in the fast-moving retail grocery trade. And, in case he should want more customers, the mills have some to spare to turn over to him.

But in counting his blessings, he has to reach for the aspirin too. Here are some of his prime headaches, as he sees them:

Shortage of many needed types of steel. The mills aren't even making some of them.

Customers are shopping around. They buy from seven or eight mills and warehouses at the same time. A solid customer relationship gets lost in the shuffle.

Scrap dealers and brokers are squeezing into the warehouse business. They are skimming off the cream, leaving the

heavy-duty stuff to the regular warehouses.

Costs are rising.

Pricing policies—at the mill and even at the warehouse—are confusing the warehousemen.

• **Critical Problem**—The last point is pretty crucial right now. Biggest worry of all: Steel mills may be forced by the federal government to change over from basing-point to f.o.b. mill pricing (BW—Jun. 12 '48, p74). Since freight is a heavy item in the customer's steel bill, this move could raise hob at the warehouses, their operators think.

Here's how they argue it: The only good warehouse selling territory would be close to Pittsburgh; that's the only mill center where a complete line of steel products is made. If mills gave up territories because f.o.b. freight charges were too high, warehouses would have to shop all over the country, buying uneconomically in many cases, to get what their customers want.

Some people think that, on this point, the price shift might benefit the warehouses. Fewer mills selling to distant points would open up more territory for warehouse business.

• **Newcomers**—Veteran warehousemen see a danger from changes in their own pricing policies since prewar days. New-

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Folks aren't as fast on the "up-take" as you think

Not so long ago, one of America's leading newspapers took a look into what let's call the "learning-power" of the nation.

You may find the figures surprising. 20% of the people, said the report, are actually unable to learn something new. Another 20% are able to learn but unwilling, either fixed in their opinions or uncaring. 40% of the people are both willing and able to learn, *provided the lessons are kept simple*. The remaining 20% include the leaders of opinion on both sides of any question, and those others whose minds are always alert, open and receptive to ideas.

These are critical times for America.

There are lessons which need to be brought home to the people again and again if the nation is to stay on the right track and keep moving ahead. The great virtues of the American way of life, the merits of our free-enterprise system, and the need for uninterrupted industrial and farm production—all of them require telling and re-telling.

Just remember that among the 80% bulk of the people, half can't or won't be reached, and the other half will find the way of truth only if you point it out very clearly.



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The most powerful of all TORNADO Industrial Vacuum Cleaners, this model has an air suction of 310 m.p.h. with a static waterlift of 56 inches—more than sufficient suction to do a quick, thorough job and remove all small metal debris. Light in weight; completely portable; plugs into any electric light outlet. Useful extra feature is design which permits motor-fan unit to be easily removed from top to become a powerful electric blower for cleaning interiors of motors and intricate machinery.

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comers in the field, they think, are getting the breaks as a result of these changes. And there are plenty of newcomers. Trade sources estimate there are around 1,000 so-called steel warehouses in business today; before the war, there were some 200.

By prewar standards, only 400 or so of the present total would qualify as warehouses. In those days, a warehouse carried up to 1,000 items of stock, served an area up to 400 miles. It bought carloads from the mills, warehoused the product and sold it in small lots—up to 9 or 10 tons to a customer.

The 600-odd "nonconformist" newcomers limit their operations. They may list 100 items; some of them don't even have warehouses. A good many are one-time scrap dealers; some were brokers. Many are in smaller cities where steel-consuming industries have grown up during the war.

• **Carload vs. L.C.L.**—Warehouses used to buy on a carload-price basis from the mills and pay the carload freight rate. Then, when they made a sale, they added to the mill cost of the steel the less-than-carload freight cost from mill to warehouse—which was higher than the carload freight cost. This formula covered costs of delivery to customers situated between the mill and the warehouse, or in the immediate area of the warehouse. For a customer farther from the mill than the warehouse, they usually added carload freight cost from mill to warehouse plus the l.c.l. freight charge from the warehouse to the customer.

Today old-line warehouses first add to the cost of the steel the carload freight charge from the mill to the warehouse. Then they add another charge: freight from the warehouse to the out-of-town customer, or cartage charges to local customers. They do this even when the customer is nearer the mill source than the warehouse.

• **Shift**—This shift has helped newcomers in the warehousing business to establish themselves in some smaller cities where they can undersell the big warehouses. (Most old-timers are in the bigger cities.) Here's how the newcomers get the break:

The old-line warehouses in Boston buy their steel from Buffalo, Sparrows Point, Md., or Pittsburgh. They add the carload freight charges from the mill to Boston to the cost of the steel. Then they slap on an l.c.l. charge to Springfield or Worcester, Mass. Meanwhile, the smaller dealer, right in Springfield or Worcester, gets his steel by rail at the carload rate. Or he may get it by truck direct from the mill—a growing practice. Thus, he cuts out the l.c.l. addition to the customer's bill; he frequently reduces or eliminates the cartage charge too, when the steel is trucked and unloaded at the customer's door.

Many of the big warehouses are meeting this new competition by establishing branches in smaller cities. And they are also shipping more by truck and less by rail.

• **Customer Trouble**—Big and little warehousemen have one common head-



Another Big Steel Warehouse for the Coast

Last week Joseph T. Ryerson & Son, Inc., formally opened its second big steel warehouse on the West Coast. A year ago the Inland Steel subsidiary opened a similar operation in Los Angeles. The new warehouse, at Emeryville, across the bay from

San Francisco, provides three spans of warehouse space, has an office building attached. Handling is mechanized; big roll tables do most of the work. A big friction saw cuts through a 24-in. I-beam in 20 seconds; another giant cutter shears 3-inch steel plates.

ache: the customer. The customer knows that warehouses are getting more steel than ever before. But what he doesn't know—or doesn't care to admit—is that the mills are not shipping sufficient tonnages of critical items, or that the mills have stopped making some items altogether.

The range of sizes and shapes of steel products shipped by the mills has declined by 60% from prewar. It is next to impossible for warehouses to get delivery on merchant (custom-made) shapes. Deliveries of bars, sheet, and strip are far below present demand. Producers prefer to sell full rolls of strip from their continuous mills to a single buyer rather than snip off pieces for smaller customers; it made little difference when strip was made on hand mills and came off in small quantities.

• **More of Them**—The tendency of mills to shuck off smaller customers has added more customers and more potential customers to warehousemen. The immediate problem is to find enough steel for the present needs of these former mill customers. And the long-range problem is to hang on to them when times get tough and mills try to wean them back.

Warehousemen worry, too, about their old exclusive customers. Some of them have grown so big that they are buying now from a number of sources, including other warehouses as well as mills. When the buyers' market returns, will the former exclusive customer continue to spread his business out, or will he go back to his old source for all his needs? That's what more than one warehouse manager would like to know.

• **Time to Sell**—Warehousemen realize they should be out selling products and services and building goodwill before the rosy market outlook turns to grey. But they hesitate to do so. If they go out and sell steel, they can't deliver. If they go out to sell service, they can't always make good either.

They figure they may be in an even worse spot if they get less steel to sell while the market stays tight. That is a real possibility as a result of steel diversion to European aid and other programs covered by voluntary allocations in Washington. A rapid buildup in those demands in the last half of 1948 could mean that mill deliveries to warehouses this year will fall below those of last year.

• **Profit Threat**—The steel middlemen would be in no enviable position then. Their cost of doing business will be hard to squeeze down while the general trend is still up. Their customers' complaints will rise in proportion to the dearth of steel. The result probably would be a year of measly profits for the group—a sad contrast from the banner profit period of 1947.



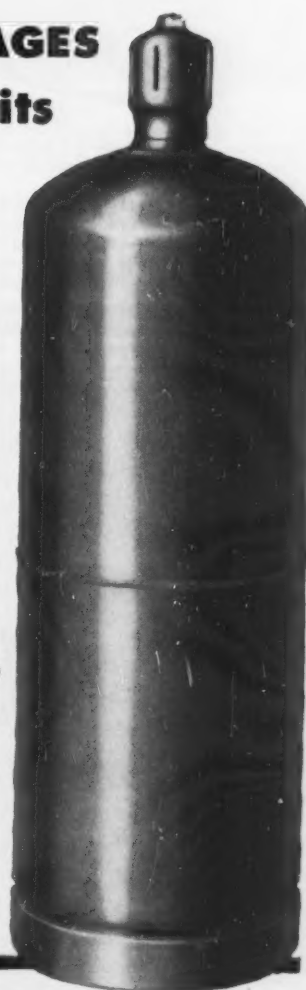
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So, when selecting cylinders, choose wisely. Select the cylinders that mean repeated economies year after year. For full details on Hackney Cylinders, write us.

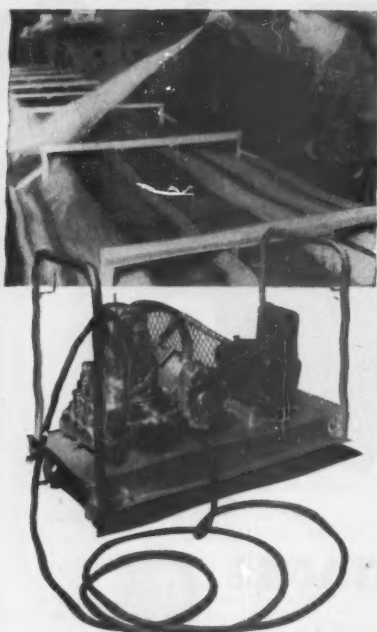


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● "We were able to cut our cleaning time in half on rotary and flat screens, do a better job than ever," says Pennsylvania paper mill.

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Selling Farmers

Westinghouse steps up sales efforts on electrical farm equipment in attempt to cash in on soaring farm income.

The more-than-100% rise in farmers' cash income since before the war has created a vast potential market for the products of industry (BW-May 17 '47, p15). Westinghouse Electric Supply Co., subsidiary of Westinghouse Electric Corp., is one of the many firms that have made a strong play for that market.

WESCO put its farm-merchandising program into effect in July, 1947. This week, as the campaign neared its first birthday, the company appraised its progress so far. Here's what it found:

- Some 3,000 farm-equipment dealers are now operating under franchise (goal is 5,000);
- In seven of WESCO's 18 sales districts, "farm sales supervisors" are working actively to aid dealers in promoting Westinghouse lines. Others will be named soon.
- More Customers—Farm income is not the only factor that has made the farm market attractive to electrical merchandisers. The rapid spread of rural electrification brought 500,000 new farms into the market for electrical equipment last year. As of Jan. 1, 3,817,100 of the nation's 6-million farms were potential customers. This year it is estimated that an additional 695,000 farms will be electrified. According to estimates made by the Farm Electrification Committee of National Electrical Manufacturers Assn., the annual farm market for electrical products is now over \$500-million.

Since farm-equipment dealers are frequently unschooled in modern selling techniques, Westinghouse has developed a two-pronged sales program. Its aims are: (1) to train the local dealer in sales methods that will convert him into an aggressive merchandiser, and (2) to stir up interest in WESCO products among farmers, and convince them that they can save time and money by electrifying their farms.

● Key Man—The sales plan revolves around the district farm-sales supervisor. He is the personal-contact man charged with training the dealer and with helping to bring farm customers into the dealer's store.

The supervisor's problem is complicated by another fact: The farm market must be cultivated in a special way. Every farmer, says WESCO, was born in Missouri—he wants to be shown. For this reason, WESCO's sales program includes plenty of demonstration selling.

● Showings—One scheme is the "family farm night." The supervisor, working

through the local dealer, invites 30 to 40 farmers to bring their families to a demonstration in the local Grange hall or in some other public building. First the group sees movies showing Westinghouse equipment at work on the farm; then the supervisor gives a demonstration of other equipment at first hand.

This summer WESCO will take advantage of another form of farm get-together—the county fair. Already the company has scheduled displays for more than 1,000 of these events.

Another demonstration technique which WESCO urges on its dealers is the trial offer. So far this method has been confined mainly to home pasteurizing units. Results have been excellent: Every pasteurizer that has been put in a farm home on trial has been sold, Westinghouse reports.

• **The Line**—WESCO's farm line includes milk coolers, welding equipment, de-icers for stock drinking troughs, farm motors, and starting equipment. The dealers also carry the customary lines of Westinghouse radios and laundry, lighting, cooking, and home refrigeration equipment.

In addition, the rural outlets also handle many products made by other manufacturers and distributed through WESCO. These include a water system made by Heil Co., ventilating systems by Ilg Electric Ventilating Co., air compressors, the home pasteurizer, and home-heating equipment—both electric and oil-burning.

• **Bright Future Seen**—Westinghouse sees a good market for its products in the future. The spread of state legislation requiring that milk for public consumption be kept below a certain temperature is a good omen for milk-cooler sales.

Figures from agricultural colleges show that stock will gain more weight during the winter if the temperature of their drinking water is above 50F; that will help sales of trough de-icers.

And a recent survey showing that the average farm uses 16 pneumatic tires (not including passenger-car tires) leads Westinghouse to believe that there is a big market for an air compressor near the barn.

At present the company is placing main emphasis on its "productive" line for farms rather than on appliances. Main reason: Demand for many appliances still tops the company's capacity. In productive equipment lines, however, the supply is adequate.

• **Promotion**—In addition to its on-the-spot sales promotion, Westinghouse does cooperative advertising with its dealers in farm papers and over the radio. The company has also earmarked \$796,000 for magazine advertising and preparation of films for farm-area showings.



There's trouble lurking behind that door (IT COULD BE YOURS!)

It's after hours and there's someone in that office. *Your* bank account may be in danger. Unauthorized persons operating your checkwriter—if it's the ordinary kind *without a lock*—can make out checks for money you may never recover!

You can assure positive, *locked* control of your funds with the new Todd Model 70 Protectograph, the modern checkwriter that provides scientific, insured protection from losses by alteration, forgery or after-work embezzling.

Todd Model 70 Protectographs write checks of every design—single checks, voucher checks, checks in sheets, even pocket-size checks—and writes them only when *your* key releases the lock. What's more, with every Protectograph you receive a non-cancelable insurance policy—at no extra cost to you.

Ask for further information about this Model 70 Protectograph. Just fill in and mail the coupon below for complete details. No cost or obligation to you.



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SALES OFFICES IN

NEW YORK
PRINCIPAL CITIES

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MAIL NOW!

THE TODD COMPANY, Inc., Rochester 3, N.Y.

Please give me complete information about the new Model 70—the *locked* Protectograph.

Company _____

Address _____

City _____ Zone _____ State _____

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BW-6-19-48

RADIO "CO-OP"

Big, well-heeled national network sponsors, able to afford tops in program talent, have long been gobbling up the lion's share of radio's glamour, prestige, and sales success. Local radio advertisers, stymied by limited budgets, have had to play second fiddle. Yet, in the aggregate, U. S. local advertisers spend vastly more than all network giants combined.

Answer to local advertisers' prayer for a potent, easy-on-the-purse network calibre program is the Mutual Broadcasting System Co-operative Plan. How it works: Mutual builds a great show around big-name talent of nationally established pulling power; then exclusive sponsorship is sold locally or regionally in each of its 499 station markets. Cost to individual sponsor is thus cut down to a small fraction of the overall expense. Latest scoop for Mutual's roster of highly successful co-op shows is JOHN NESBITT's famed PASSING PARADE.



Millions listen—For a decade John Nesbitt has been rated the most original, most entertaining, most popular story teller on the air*. Listeners to his PASSING PARADE program are enthralled by his fascinating narrations of strange, unusual stories. Each an absorbing true tale packed with action,

drama, irresistible human interest appeal. He has a huge, enthusiastic following coast-to-coast—the kind that rings cash registers for sponsors of his programs.

Story-teller's success story—Nesbitt's sensational performance for BANK OF AMERICA and other West Coast sponsors landed him on the networks for CHESTERFIELD CIGARETTES, WESTINGHOUSE and JOHNSON'S WAX. His Hooperatings hit a high of 14.1—outstanding for a one man show! Reported Bank of America: "We have had 14 radio productions in seven years. The Nesbitt program brought in four times as much business at less than half the cost of any other program sponsored by us."

Bonanza for alert advertisers—If you are a local or regional advertiser, Nesbitt's PASSING PARADE, now presented as a Mutual Co-op, offers a golden opportunity to profitably sponsor top network entertainment at surprisingly moderate cost. Your product can reap benefit of this big-time show with sure-fire appeal—a mass audience show that also sells. Available as 15-minute program, 5-a-week. Started February 1st, already sold in over 100 cities. For booklet, rates and audition platter, call your local M.B.S. station or

Mutual Broadcasting System

Co-operative Program Department
1440 Broadway, New York, N.Y.
Tribune Tower, Chicago, Ill.

*On the screen, too. Nesbitt's Passing Parade pictures have won five Academy Award Oscars for the best film short of the year; are shown in 9,000 movie houses; which adds up to more publicity, more listeners for his radio programs.

Batteries for Dixie

Major manufacturers are building plants in Memphis and other southern cities to be nearer a growing market.

Battery manufacturers are doing their bit in the industrialization of the South. Since the war, major battery makers have established a dozen new plants from Texas to Georgia.

• **Another Plant**—Latest to move South is General Dry Batteries, Inc., of Cleveland, which will open up a dry battery plant in Memphis early next month. At top production the new plant will employ some 800 workers in two shifts.

It will be Memphis' first plant for the manufacture of dry cells. Storage battery production in the city tops a million units a year. Most of the firms have moved into Memphis since the war.

• **Underlying Reasons**—The need for better distribution is responsible in large measure for the battery industry's southward trek. Manufacturers want to get closer to the steadily growing southern market. And they also have another reason for their move: Batteries enjoy a lower freight northbound rather than southbound. This is due in part to the fact that both railroads and truck lines give concessions on batteries in order

to get a profit-paying cargo going north.

In the case of Memphis, General Dry Batteries and other manufacturers have found two advantages: (1) Costs are cut by shipping raw materials in by river; (2) Memphis' iron-free water doesn't have to be treated.

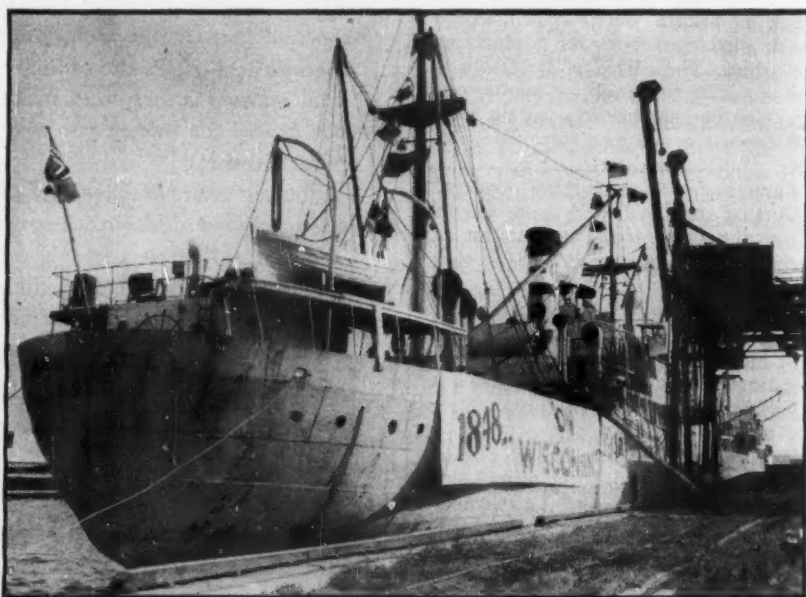
• **Other Companies**—The spearhead of the southern drive was Globe-Union, Inc. It moved to Memphis several years ago. Its newly enlarged plant employs about 150 and has a capacity of 400,000 wet batteries a year. It also has battery plants in Dallas and Atlanta.

Others located in the Memphis-Dallas-Atlanta triangle:

National Battery Co. manufactures 26 brands of batteries in its Memphis plant (capacity: 400,000 batteries a year). It has also established plants at Dallas and East Point, Ga., just outside Atlanta.

Willard Storage Battery Co.'s recently opened Memphis plant has a capacity of 250,000 automotive batteries a year. It operates a Dallas plant. Willard's parent company—Electric Storage Battery Co.—is planning an automotive battery plant at Atlanta.

Ray-O-Vac Co. has moved into the Memphis region. Two subsidiaries have plants under way at Jackson, Tenn. and Paducah, Ky. The Jackson plant will employ 200 to 250 people and will turn out heavy dry batteries for nearby markets; the Paducah plant will start out with a payroll of 200 and an output of 150,000 dry cells a day.



Wisconsin Stocks Its Friendship Fleet

Wisconsinites are taking advantage of their centennial anniversary to let Scandinavia—original homeland of many a Wisconsin settler—know of the state's industrial prowess. This Norwegian freighter is a good example of how they are doing it. The ship is carry-

ing a load of Wisconsin industrial products and personal gifts of food and clothing to Scandinavian countries. It is the first of several that the state plans to send off during the summer, as part of a Wisconsin Centennial Friendship Fleet.



THE WALKING FISH of Sacandaga was a warning to G.E. conference members that ...

Power Sales Habits Need to Change

Nation's top utility, equipment executives are told that their future is bright—if they'll start selling before they have to.

The electric power industry was warned last week not to become like the Walking Fish of Sacandaga, which died by drowning. It can avoid such a fate by getting back into the habit of selling before the buyer's market comes. If it does, it will enjoy great prosperity, because giant uses for more power in industry are in plain sight.

• **Conference**—That vista and challenge came to power company officials at a General Electric-sponsored industrial power sales conference at Sacandaga, N.Y. It was described as the first meeting of its kind on a national scale. To it came 125 of the nation's top utility executives—directly from the Edison Electric Institute meeting in Atlantic City.

Local folklore provided the sales symbol of the session. C. H. Lang, vice-president and manager of apparatus sales for G.E., told the utility men this story: Si Brown, the Paul Bunyan of the Adirondacks, taught a fish to walk on dry land during the great drought of 1848. While other fish in the Sacandaga river died, the walking fish, adjusted to living out of water, survived. But when the drought broke in September, the walking fish up and drowned in a cloudburst.

• **Fish Out of Water**—Lang recalled that in 1940 power sales and equipment salesmen began to feel like fish out of

water: Selling had become unnecessary. But, warned Lang, the cloudburst is coming. "Supply is slowly but inexorably catching up with demand," he said.

So through two solid days and 30 speeches, cooperative action by electric utilities and electrical manufacturers to push electrification of industry was urged.

• **Sales Program**—F. M. Roberts, assistant manager of the G.E. industrial engineering divisions, outlined a three-point program for utility and apparatus salesmen to follow: (1) Show new buyers how they can profit from new electrical apparatus; (2) convey electrical ideas to customers in terms of "industry language," understanding, and objectives; and (3) select that combination of electrical equipment that can do the job best.

The size of the potential market was indicated in several ways. One example: the production of synthetic fuels. G.E. engineers figure that it would take almost as much power to produce 2-billion bbl. of synthetic liquid fuel a year as is now generated by the entire utility industry.

• **The Problem**—Frank Gaskill, sales manager for Philadelphia Electric Co., summed up the conference by saying: "There is no question as to capacity to supply. Our problem centers squarely on our ability to market our product."

ANY LENGTH • ANY HEIGHT • ANY WIDTH



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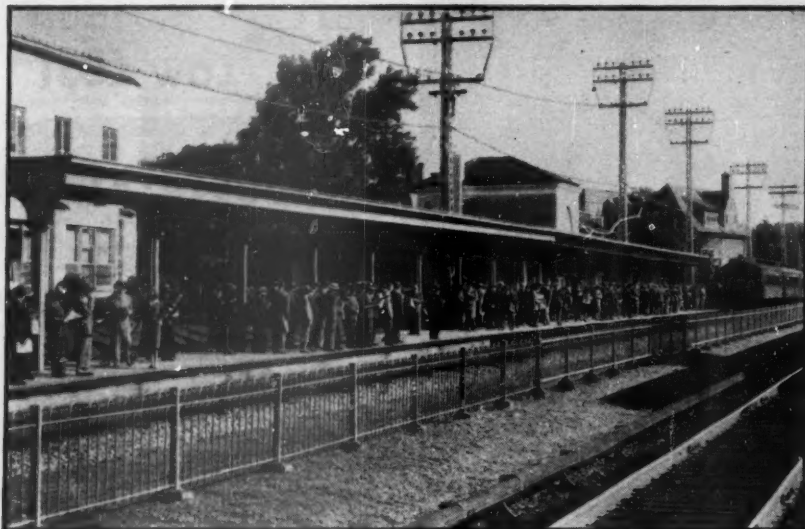
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EVENING'S mad dash, they're . . .

Commuters: The Railroads' Problem Children

Roads claim service for them costs more than it brings in. Rate commissions say, "If you want higher rates, prove it."

During the rush hour one rainy evening last week, commuters on the Long Island R.R.—the nation's biggest commuter road in point of passengers—got another surprise. They were on a train headed for Jamaica station—but on a track that didn't have a platform. Result of the error was that 43 trains were snarled at a time when dayworn passengers were touchiest. The incident occurred just as the line's \$17-million program for better service was in full swing. And the commuters had something new to add to a long-standing feud with the Long Island.

• **Red Balance Sheets**—Over the years the railroads have regarded commuters as a terrible headache—particularly financially. Almost every road claims it cannot go on forever running a commutation service at whopping losses. Unless they can get higher fares, say the carriers, the Interstate Commerce Commission is going to be swamped with pleas for abandonment of commuter service.

It's an old saw in railroad circles that each type of traffic must be self-supporting. And it's in the nature of the beast that commutation service is an inefficient operation. The trouble is that the roads don't have the figures to convince the commuter that the service given to him costs the railroads more than he pays for.

• **Over-all Figures**—On broad lines, railroad operators can back up their claim

without much trouble. The ICC recently released figures that show the carriers are missing their goal by a wide margin. Said the ICC: 1947 net deficit from all types of passenger operations on 25 class I railroads (accounting for 83% of all passenger revenues in the nation) was \$426-million. This is a new high, 63% greater than 1940, the previous peak deficit year. At the same time, said ICC, the 1947 traffic—measured in revenue passenger miles—was 93% more than in 1940.

Deficits over a whole system don't cut much ice with the commuters. The railroads, they say, must either put up or shut up—either produce cost figures showing how the commuter is a losing proposition, or go on operating at a loss. The commuter sees no reason why he should be called on to help pay the bill for any part of the system that he doesn't ride on.

• **New Haven Turndown**—The New York Public Service Commission apparently shares this view.

Because the New York, New Haven, & Hartford R.R. could not produce such figures, the P.S.C. this month turned thumbs down on a New Haven petition for 15% to 25% increases on commutation fares within New York State. Said the P.S.C.: The New Haven didn't prove its case, didn't show it was losing money on its commuter operations "within New York State." Right now, said the P.S.C., the New Haven's

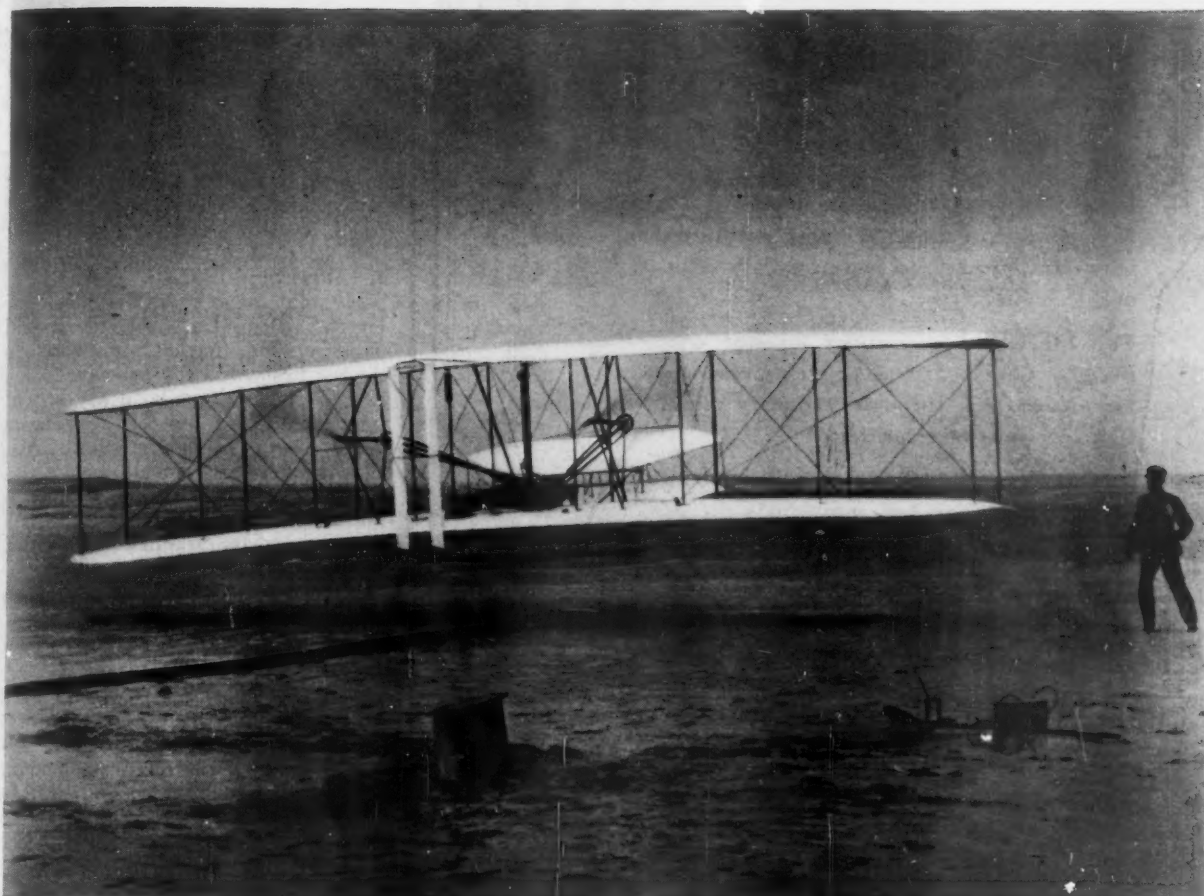
commutation fares are highest in the area.

• **Commuters' Witness**—Commuter interests were out in force at the P.S.C. hearing. Star witness was Herbert Askwith, head of a make-shift organization called the Westchester Commuters Group. Askwith is no expert on railroad matters (he runs a New York publicity office). But he rides the New Haven each day to and from his Larchmont, N. Y., home and feels he has a vested interest. He and his colleagues, on their own time and money, armed themselves to the teeth with facts and figures to throw at the New Haven. When the smoke cleared, Commuter Askwith had won a clear-cut victory.

• **New Haven's Side**—The New Haven threw up a barrage of figures in support of its claim. Last year, said the railroad, the whole system showed a deficit of about \$5-million. One reason: Commuters were not paying enough for their service (which most agreed was among the best).

In 1947 more than 61-million passengers rode the New Haven; more than half were commuters and suburban passengers. Total passenger revenues exceeded \$56-million; of this, commuter revenues accounted for just under \$7-million (\$2.5-million in the New York area. The system's 1947 passenger deficit was \$4.4-million.

On the cost side the New Haven said its bill for materials, fuels, and supplies was up \$5.2-million in 1947 over 1946. Wages were up, too. In 1925—the last time the New Haven got a fare boost in the New York area—a railway em-



(Brown Brothers photo of the Wright Brothers' first flight. Kittyhawk, N. C., December, 1903.)

Nothing ventured... *nothing gained!*

No one guaranteed the Wright Brothers that their "box kite" airplane would fly... but it did! No one could be certain that the years of planning, the hopes and dreams, the effort, the hard-earned dollars would pay off in achievement... but they did!

Once again, man's willingness to *venture* had paved the way for *progress*.

In a free land such as ours everyone plays a part in one venture or another. Some contribute ideas—men like the Wrights, Edison, Bell, Steinmetz, De Forest. Some carry out ideas—the managers and workers. Some

provide the necessary money for tools, factories, raw materials and wages—the investors.

Of all these, the role of the investor is least known, least understood. The individual who sets aside part of his income for investment in industry is but one of millions of similar risk-takers, scattered through all walks of life, unorganized and unrecognized. Yet, without the venture dollars provided by these thrifty citizens, the nation's production of goods could not increase, its standard of living could not rise.

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as the nation's principal market place for investors, believes there is urgent need for a governmental policy—particularly a *tax* policy—that gives every individual an opportunity to save, and an incentive to put his surplus dollars to work for the benefit of all our people.

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Vancouver	Montreal	Havana	London

ployee's straight time hourly wage rate was 62.6¢ per hour (in the New York area). In April, 1948, the same rate was \$1.29 per hour.

• **Cross-Examination**—But Commuter Askwith, in cross-examining a New Haven witness, found that the New Haven's fixed charges were actually a lot lower since the railroad was reorganized last July. As for increased wages, Askwith figured they would cost the New Haven only \$950,000 more in 1948 than in 1947.

He went on to show that the New Haven system had received several passenger and freight rate boosts in the last two years. It's too soon to tell just how much the railroad will benefit from these hikes. But the New Haven had to own up to some intelligent Askwith assumptions:

(1) If this year's freight volume is the same as last year's, new rates will bring in perhaps \$24-million in added revenues.

(2) If coach traffic is as heavy this year as last, revenues will rise 28%, or \$12.3-million. (In 1947 the New Haven's passenger load slipped 6% under 1946, 10% under 1945.)

(3) If the 1948 parlor car and sleeper traffic equals 1947, the railroad will get \$566,000 more in revenues.

(4) And if commuter traffic stays as heavy this year as last, \$800,000 more will come from commutation fares. (The



Mechanical Check Signer

A new time and labor saver for bankers is this Protectograph mechanical check signer. By using the machine, bank tellers can issue official cashier's checks without running to an officer each time a check is issued. Also, the mechanical signer lets branch banks issue checks signed by the main office cashier; this brings prestige to the branch bank. Protectograph is manufactured by the Todd Company, Rochester, N. Y.

ICC granted the New Haven a 20% boost in interstate commutation fares last September.)

• **System-wide Figures**—Askwith left himself open to the charge of asking the New Haven to carry a losing commutation business on the increased revenues from its other services. But the railroad couldn't press the point. It filed its claim on the basis of system-wide figures. Askwith merely questioned them to give force to his main point—that the railroad's figures didn't tell the whole story. The clincher: No figures were available on how much it cost to take Commuter Askwith to and from his Larchmont home.

Right now the New Haven doesn't think it is worth the millions of dollars necessary to make a detailed cost study. Reason: The New Haven doesn't think its accounting methods would be accepted by the P.S.C.—or the commuters.

• **New York Central Victory**—The New York Central System thinks otherwise. In February, the New York P.S.C. granted the Central a 10% interim increase in its commutation fares. At the same time the Central said it would have a detailed cost analysis ready by this September. The Central expects it will be the first railroad in the country to find out how much it costs to take one commuter one mile, and one commuter train one mile. It is confident the survey will prove that the commuting business doesn't pay.

• **Comparison**—Why does it think so? The Central's Harlem Division—serving the Bronx and Westchester—carries 174 trains on a normal weekday. Last year Harlem Division trains grossed about \$3.8-million. This wasn't as much as any one of the Central's crack long-haul passenger trains brought in. Some examples: The Empire State Express (daily to and from New York and Cleveland) grossed \$5-million; the Wolverine (daily to and from New York and Chicago, via Detroit), \$4-million plus; the 20th Century and the Commodore Vanderbilt (daily to and from New York and Chicago), \$4-million each.

More than 40-million commuters and suburban passengers—64% of the Central's total New York passenger traffic—came through Grand Central Terminal last year. The Central thinks that for every \$6 the commuter kicked in, the railroad paid out \$10.

• **Improvements**—However, the Central is not giving up its commutation business. Last week the railroad said that 30 new, air-conditioned commutation cars would be in operation late next year. The cost: \$3-million.

Besides adding new cars, the Central improved its Harlem Division service a lot this year. It did this by cutting down the number of stops its local commutation trains made and adding a few more express trains to the schedules. The

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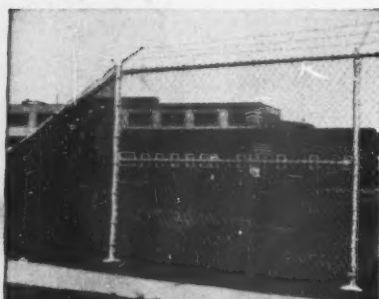
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Central found that where a local commutation train took 17 minutes to pass over a given stretch of track, five express trains could do it in 10 minutes.

• **Long Island Trouble**—Probably one of the most picturesque sufferers in the commutation business is the Long Island R.R. It plodded into the drifts—and the limelight—last winter, when the East's record snowfall blanketed its roadbed.

The Long Island—a wholly owned subsidiary of the Pennsylvania R.R.—is unique: It gets 67% of its revenues from short-haul passengers. Last year 112,802,114 persons rode the Long Island; 43% were regular commuters.

And last year the railroad showed its greatest deficit—just under \$4-million.

Now, after years of neglect, the road is going all out to show that the Long Island isn't so bad as it sounds.

But the owners are still totting up record losses. Right now the railroad has the lowest commutation rates in the New York area—despite a 20% fare boost granted by the New York Public Service Commission in March. The Long Island asked the P.S.C. for a 25% boost; it thinks, though, that it will take a lot more than that to give the railroad a healthy financial complexion.

• **Boston's Old Colony**—Outside New York, the commutation business isn't

Corporate Billion-Dollar Club at New Peak

Seventeen nonfinancial businesses could boast of over \$1-billion assets at the end of 1947. That's the largest membership ever for the corporate Billion-Dollar Club. Even at the height of the war boom it never rose above 16 (BW-Oct. 7 '44, p. 65). There were only 14 companies in the blue chip group in 1946 (BW-Aug. 16 '47, p. 71). In 1939, they totaled just a dozen.

The number of companies with annual revenues or sales of over \$1-

billion has jumped even more sharply. Last year there were 14, thanks to high production and prices. In 1939 there were only two. Even when war production hit its peak a few years ago, only 10 were eligible for the charmed circle. Eight made it in 1946.

Here are the nonfinancial companies whose resources (with physical assets taken at net valuation) or revenues and sales topped the \$1-billion mark in 1947:

	Assets as of		Growth Since 1939
	Dec. 31, 1947	Dec. 31, 1939	
Bell Telephone System.....	\$8,772,000,000	\$5,227,000,000	68%
Standard Oil Co. (N. J.).....	2,996,000,000	2,035,000,000	47
General Motors Corp.....	2,473,000,000	1,323,000,000	87
Pennsylvania R. R.....	2,221,000,000	2,008,000,000	11
United States Steel Corp.....	2,163,000,000	1,769,000,000	22
New York Central R. R.....	1,732,000,000	1,631,000,000	6
Southern Pacific System.....	1,688,000,000	1,646,000,000	3
Standard Oil Co. (Ind.).....	1,268,000,000	723,000,000	75
Socony-Vacuum Oil Co.....	1,262,000,000	930,000,000	36
Atchison, Topeka & Santa Fe Ry.....	1,257,000,000	1,116,000,000	13
Baltimore & Ohio R. R.....	1,186,000,000	1,110,000,000	7
Consolidated Edison Co. (N. Y.).....	1,159,000,000	1,274,000,000	-10
Union Pacific R. R.....	1,155,000,000	1,101,000,000	5
Commonwealth & Southern System.....	1,125,000,000	1,071,000,000	5
Texas Co.....	1,115,000,000	661,000,000	69
E. I. du Pont de Nemours.....	1,112,000,000	736,000,000	51
General Electric Co.....	1,027,000,000	434,000,000	137

	Sales or Revenues		
	1947	1939	
General Motors Corp.....	\$3,815,000,000	\$1,377,000,000	177%
Great Atlantic & Pacific Tea Co.....	*2,546,000,000	*990,000,000	157
Standard Oil Co. (N. J.).....	2,355,000,000	934,000,000	152
Swift & Co.....	**2,249,000,000	**757,000,000	184
Bell Telephone System.....	2,225,000,000	1,107,000,000	101
United States Steel Corp.....	2,123,000,000	940,000,000	135
Sears, Roebuck & Co.....	***1,982,000,000	***617,000,000	221
Armour & Co.....	**1,957,000,000	**715,000,000	174
Chrysler Corp.....	1,363,000,000	550,000,000	148
General Electric Co.....	1,186,000,000	396,000,000	199
Montgomery Ward & Co.....	***1,159,000,000	***475,000,000	144
Safeway Stores, Inc.....	1,117,000,000	836,000,000	189
Bethlehem Steel Corp.....	1,032,000,000	414,000,000	149
Socony-Vacuum Oil Co.....	1,029,000,000	496,000,000	107

(Ford Motor Co. may properly belong in one, or both, of these groups; no 1947 operating figures have yet been published.)

* Fiscal years ended in February, 1948 and 1940.
1939. *** Fiscal years ended in January, 1948 and 1940.

** Fiscal years ended in October, 1947 and



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store of business, financial and credit records at your disposal at any time.

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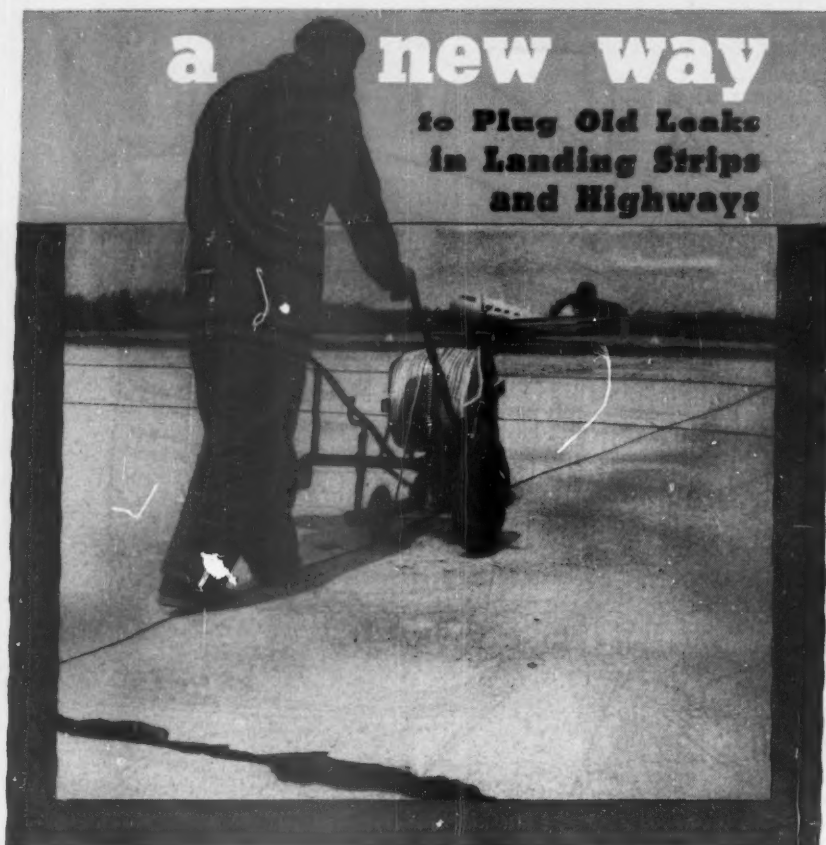
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In repairing airport landing strips (or concrete highways) the newest and fastest procedure is to plough out the old asphalt between the concrete slabs and refill with hot liquid rubber.

The hitch is that pockets are often found under the concrete slabs, and the liquid rubber runs right through. Filling these "bottomless" cracks is expensive, and it takes time. And most airport-maintenance contracts have a penalty-clause for tying-up the port.

With the aid of a Twitchell engineer a new, fast, inexpensive process was developed recently for pre-caulking these cracks with a continuous dam of 3/8" or 1/2"

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faring any better. In Boston, the New Haven's Old Colony line (serving Boston's south shore and Cape Cod) appears to be operating on borrowed time. For 15 years the New Haven has been trying to have the Old Colony amputated from its system. It looks as if it has finally succeeded.

A Massachusetts court order last year ruled that the New Haven could give up the Old Colony if the line lost more than \$850,000 between October, 1947, and September, 1948. For the first five months of the test year the Old Colony's deficit was \$1.8-million. Total loss last year was \$3.6-million.

The New Haven has agreed to hang on until March, 1949. What happens then is anybody's guess. One good bet: The Greyhound Corp. has shown interest in a bus franchise for the whole area. Another possibility—that the State of Massachusetts would operate the Old Colony—would be only a last resort.

• **Other Boston Lines**—The two other big commutation services in Boston, the Boston & Maine R.R. and the N. Y. Central-leased Boston & Albany R.R., are waiting to see what happens to the Old Colony before broadcasting their financial woes. Both lines need outside help badly, claim they pay out \$1.42 for every commuter dollar they get.

• **Government Aid?**—The idea of subsidies makes most railroad men see red. But interested parties outside the railroads think they may be the only answer. They argue: The government got behind a good-roads program to give suburban areas high-speed transportation. The roads are in direct competition with the railroads. And they have the tremendous advantage of being tax free. Why shouldn't the railroads have the same advantages?

Boston's South Station (terminal for the B. & A. and the New Haven) has been bankrupt for the last decade. One reason: It pays the city \$800,000 rental a year. And, of course, each railroad pays taxes on its right-of-way and other holdings.

The New York Central has another slant on the tax angle. Says the Central, railroads are "dedicated to the traveling public." So is New York's LaGuardia Airport—a city-built, tax-free project. Yet the Central is the third biggest contributor to LaGuardia Airport. The Central's yearly tax bill from the city is \$10-million.

• **Western Services**—Out West, commutation services suffer all the diseases of their eastern counterparts.

The Southern Pacific R.R. used to operate three commutation services out of San Francisco. It is now down to one. The other two were knocked out by competition from the rapid-transit lines and the automobile.

The opening of the San Francisco Bay Bridge in 1936 and the Golden

Gate Bridge in 1937 doomed two of Sopac's commutation routes. Sopac's commutation traffic fell from a peak of 20.9-million in 1926 to 10.6-million in 1940.

And Sopac's remaining commutation service—the Peninsula line—is currently No. 1 headache to the railroad's management.

• **Fight for Boosts**—Sopac filed for (and got) fare increases for its Peninsula service in both 1946 and 1948. Both times it was a tough fight. The California Railroad Commission (like all such commissions) was very skeptical of Sopac's figures. And Sopac didn't have the necessary cost breakdowns to sharpen up their point.

In 1946, when Sopac got a 20% boost for its Peninsula service (the first in 26 years), it said it was taking a \$703,000 out-of-pocket loss each year on this line. The increase would cut this loss to \$500,000. This year when Sopac got a 124% average increase for its Peninsula service, it said its out-of-pocket loss plus depreciation from commutation service was \$420,574.

• **Operation Troubles**—In pleading its case Sopac brought out a point that all railroaders wish the public could get through their heads: A commutation service is an extremely inefficient business.

Said Sopac: Every weekday 27 trains leave San Francisco on the Peninsula line, and 26 come in from the suburbs—using a total of 140 coaches and 30 locomotives. Two-thirds of this equipment is in service about three hours a day; the other third about six hours a day. And 100 of the coaches operate less than 100 miles a day, the other 40 not more than 200 miles daily in the normal five-day week. On sidings the equipment is just costing—not making—money.

The same goes for train crews. There are 22 crews assigned to the Peninsula service. Of these, 17 make only one round-trip a day, five days a week. These men are actively employed for about three hours. But they are paid for 12 hours and 15 minutes, including three hours and 15 minutes overtime. (Railroad labor must be employed at base pay for eight hours in a span not exceeding nine. After that overtime comes in.)

Years ago railroads generally weren't as efficiency-conscious as they are now about the commuting problem. And for a very good reason. Wage rates and fuel and material costs didn't take such a big bite out of gross revenues in those days. And passenger rates actually weren't so very much under those that now prevail.

Even more important, perhaps, in the "good old days" the railroads knew they were handling all the transportation business moving in and out of their commuting areas. That's no longer the

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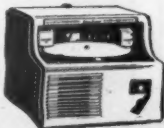


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case. Since World War I much of such traffic, including virtually all the high tariff items, has been captured by trucks, buses, and the private automobile.

• **Still Unanswered**—To the commuters all these points don't answer the big question: How much does it cost to take them to and from work? How much does labor eat up? How much is wiped out by inefficient use of facilities? The railroad operators have their work cut out for them. Either they educate the commuters to their methods of accounting, or adjust their figures to the commuters' wants.

Avery Still Boss

Montgomery Ward board
cancels bylaw revisions which
limited chairman's authority.
President Norton resigns.

The patched-up settlement of management troubles at Montgomery Ward & Co. came unglued again last week end.

• **Revolt**—About a month ago a group of top executives, including Ward's president, Wilbur H. Norton, threatened to resign in protest against Board Chairman Sewell L. Avery. His iron-fisted control over company policies

prompted the move. To avert mass resignations, the directors amended the bylaws to (1) give Norton wider authority over merchandising and personnel, and (2) limit Avery's authority largely to financial matters (BW—May 29 '48, p. 92).

Now the board has reversed that action. At a special meeting, the directors voted to accept Norton's resignation and to rescind the changes in the bylaws.

• **Reasons**—The unexpected decision points up the fact that Avery is still undisputed boss at Ward's. Neither Avery nor the company would amplify the bare statement of the board's action. But Chicagoans familiar with the company's affairs think they know the reasons for the reversal:

(1) Neither Avery nor the directors foresaw that the changes in the bylaws would become public once they were filed with the Securities & Exchange Commission and the New York and Chicago stock exchanges.

(2) Avery felt that the resulting publicity reflected unfavorably on him.

(3) So Avery demanded that the directors reverse themselves and accept Norton's resignation.

• **Follow the Leader**—Following Norton's lead, another of the executives who were in on the abortive revolt resigned this week. He is Oswald B. Higgins, vice-president and general operating manager. Observers think others will follow suit soon.



Bank Butters Up Its Stockholders

This party, given by Paterson Savings & Trust Co., Paterson, N. J., was a treat for children as well as grownups—especially those who got to finger this \$10,000 bill. The open house was in honor of the bank's 79th anniversary. Like those given by Pepsi-Cola it also served to warm up rela-

tions between the bank and its 400 stockholders—and point up how the institution has grown in the last year. In 1947 the bank changed its name from Paterson Savings Institution, took over Peoples Bank & Trust Co., Passaic, and added complete commercial banking services.

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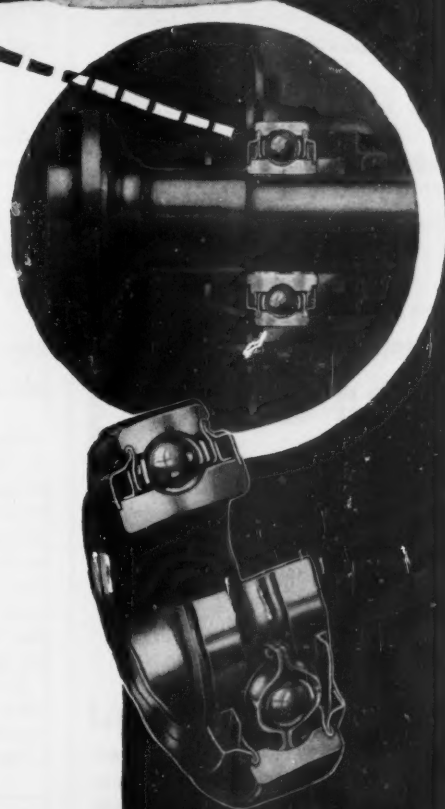
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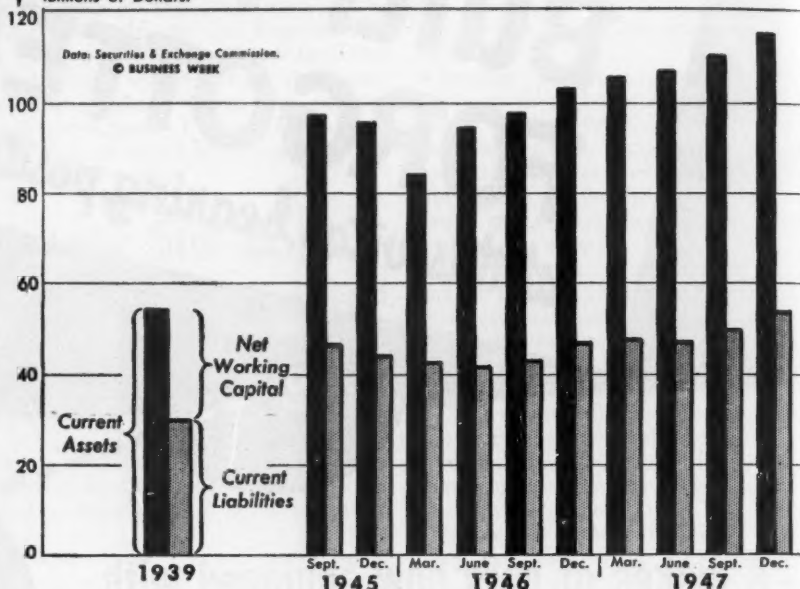
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THE MARKETS

Current Assets and Liabilities of U. S. Corporations



High Cost of Doing Business

It worries the stock market, even though net working capital kept on rising through 1947, SEC survey shows. But the need to plow back earnings means less dividends for stockholders.

One thing that obviously is preying on the stock market's mind is the amount of money that a company needs to do business these days. The steadily growing strain on working capital is not an acute worry yet. But it is something that traders watch uneasily. It's one more of those nagging uncertainties that make it hard to get a real bull market going.

Knowing this, many traders have been taking a look at the figures—just issued by the Securities and Exchange Commission—on current assets and li-

abilities of United States corporations. **• More Working Capital**—By and large, these latest working-capital figures (chart above, and table page 101) look good. Total assets increased \$12.4-billion during 1947. At the end of the year they came to \$116-billion. Liabilities rose \$7.1-billion during this time, reaching \$54.2-billion at year-end.

As a result, corporations added \$5.3-billion to net working capital (current assets less current liabilities) during the year. Net working capital on Dec. 31, 1947, figured out to \$61.8-billion. This is about two and a half times what it was in 1939.

• Strong Ratio—To the financial analyst the balance sheet still presents a fairly clean face, though it doesn't look so well scrubbed as it did a couple of years ago. The current ratio (current assets divided by current liabilities) figures out to 2.14. In 1939, it was only 1.82. Most accountants consider two-for-one a fair ratio for an individual company.

Even the quick asset ratio (current assets excluding inventory divided by current liabilities) works out to 1.37. Analysts consider one-for-one a good

Security Price Averages

	This Week	Month Ago	Year Ago	
Stocks				
Industrial	168.7	165.9	160.9	146.5
Railroad	50.8	50.8	51.5	39.9
Utility	73.9	73.6	73.2	73.5
Bonds				
Industrial	120.8	120.8	120.4	122.0
Railroad	108.0	108.0	107.3	107.0
Utility	118.4	118.3	119.0	112.8

Data: Standard & Poor's Corp.

enough quick asset ratio for the ordinary company.

• **Not So Liquid**—But the longer traders study the figures the less comfortable they feel. For one thing, many analysts think that the traditional ratios don't mean much these days. They argue that during the boom all corporations should be building up big backloads of liquid assets to carry them through any readjustment that may come along later.

Wall Street hasn't overlooked the fact that the current assets of U. S. corporations have been getting less and less liquid ever since the end of the war. On Dec. 31, 1945, corporations had \$42.6-billion in cash and government securities. At that time only \$27-billion was tied up in inventories. By the end of 1947, cash and governments were down to about \$36.6-billion. Inventory had climbed to \$42-billion.

As long as sales and prices hold up, inventory is as good as money in the bank—or better. But it might be a different story if business dropped off.

• **Expansion Financing**—And it isn't just current operations that are putting a strain on working capital. According to SEC figures, corporations increased

their net property accounts by about \$10-billion during 1947. This represents additions to plant, or modernization and replacement programs.

In the long-term liabilities section of the balance sheet, corporations showed a \$5.7-billion increase in funded debt and equity securities outstanding. Of this \$4.4-billion was debt (bonds and long-term bank loans). The other \$1.3-billion was equity financing.

• **Plowed Back Earnings**—This increase in long-term debt and equity, plus the rise in current liabilities, financed something better than half the increase in current assets and net investment in property. But the biggest single source of new money during 1947 was retained earnings. SEC figures that corporations plowed back over \$9-billion out of current earnings during the year. This represents close to 15% of the total net working capital at the end of 1947.

Going over the figures, Wall Streeters can understand why many corporations have followed a tight-fisted dividend policy in spite of big earnings. But understanding doesn't make them feel any better about the prospect for dividends and stock prices.

U. S. Corporations' Working Capital Position

Current Assets

(In Billions of Dollars)

	Cash	Government Securities	Receivables	Inventories	Other	Total
1939.....	\$10.8	\$2.2	\$22.1	\$18.0	\$1.4	\$54.5
1940.....	13.1	2.0	24.0	19.8	1.5	60.3
1941.....	13.9	4.0	28.0	25.6	1.4	72.9
1942.....	17.6	10.1	27.3	27.3	1.3	83.6
1943.....	21.6	16.4	26.9	27.6	1.3	93.8
1944.....	21.6	20.9	26.5	26.8	1.4	97.2
1945.....	21.6	21.0	24.6	27.0	2.4	96.6
1946.....	21.3	14.9	30.0	35.7	1.7	103.6
1947:						
Mar. 31.....	20.4	14.1	31.6	38.3	1.8	106.2
June 30.....	21.8	13.0	32.0	39.1	1.5	107.4
Sept. 30.....	22.3	12.9	33.8	39.9	1.9	110.7
Dec. 31.....	22.9	13.7	35.7	42.0	1.6	116.0

Current Liabilities

	Payables	Taxes	Other	Total
1939.....	\$21.9	\$1.2	\$6.9	\$30.0
1940.....	23.2	2.5	7.1	32.8
1941.....	26.4	7.1	7.2	40.7
1942.....	26.0	12.6	8.7	47.3
1943.....	26.3	16.6	8.7	51.6
1944.....	26.8	15.5	9.4	51.7
1945.....	25.4	10.4	9.0	44.8
1946.....	30.3	7.9	9.0	47.1
1947:				
Mar. 31.....	30.5	8.3	9.3	48.1
June 30.....	29.5	8.7	9.4	47.6
Sept. 30.....	31.3	9.1	9.9	50.3
Dec. 31.....	34.2	10.0	10.0	54.2

New Working Capital

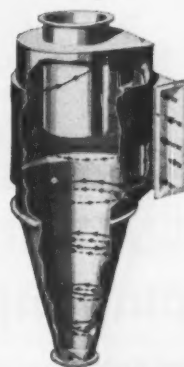
1939.....	24.5	1946.....	\$56.5
1940.....	27.5		
1941.....	32.3	1947:	
1942.....	36.3	Mar. 31.....	58.1
1943.....	42.1	June 30.....	59.8
1944.....	45.6	Sept. 30.....	60.4
1945.....	51.8	Dec. 31.....	61.

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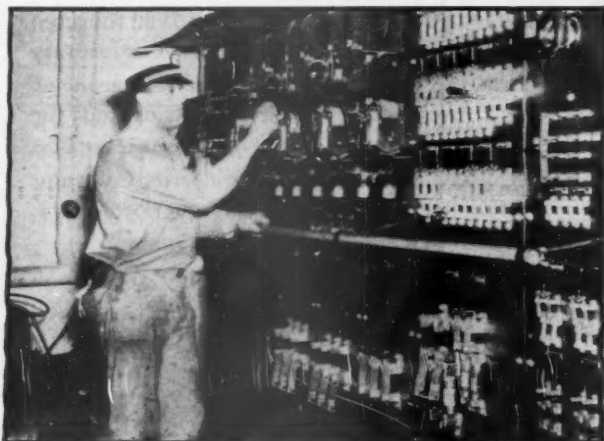
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Ideologies, not economics, make longshoremen (left), sailors (right) . . .



. . . Marine engineers (left), and radiomen (right) a maritime problem as . . .

Shipping Injunction Brings Truce—But Not Peace

Real tug-of-war in present contract dispute is between the right and the left for control of workers. It can mean a serious strike.

A federal injunction against a maritime strike kept longshoremen, sailors, and other seafaring tradesmen at work this week. But it assured no more than a temporary peace on the waterfront—and even this looked like a shaky truce. For, although the antistrike writ requires unions to bargain "in good faith" with employers, on a new contract, bargaining on economic issues isn't

likely to sound the true depths of current maritime problems.

• **Control of Workers**—The real stake in the present dispute is control of the workers who keep American shipping moving in the sea lanes. Contract issues—including the controversial hiring-hall demand—are the weapons being used in a union political struggle. Ship lines are caught in the middle.

The tug-of-war is between right-winger Joseph Curran, president of the National Maritime Union (C.I.O.), and left-winger Harry Bridges, head of the International Longshoremen's & Warehousemen's Union (C.I.O.). Once left-wing allies, the two are now bitter foes.

• **Left-Wing Aim**—Bridges, who has strong support in N.M.U. top offices, is out to discredit Curran, and to supplant him in N.M.U. with leftist leadership. If he can do it, Bridges—and left-wing policies—will be firmly entrenched.

This objective ranks high on the pro-

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Owen & Chappell, Inc., New York advertising agency, will handle the A.F.L.'s \$500,000 public relations campaign—which starts July 1.

This campaign is separate from A.F.L.'s political operation—which under the T-H act, cannot be financed with union funds. The main goal of the O. & C. effort has been announced as "combatting Communism."

O. & C. is best known as the agency handling White Horse Scotch, Hunter and Wilson whiskey, National Premium beer, and several other alcoholic beverage accounts. It got the A.F.L. job by making a presentation at the last Executive Council meeting.

Final plans on how the program will operate await conferences between Millard Bennett, O. & C.'s account executive, and George Meany, A.F.L. secretary-treasurer.

gram of the Communist Party. Its American followers fought vainly to block approval of the European Recovery Program. Now, with that fight lost, it wants to have the tactical advantage of being able to bottle up ERP shipments. That means control over longshoremen on the West Coast, merchant seamen on the East Coast.

(This week, right-wing A.F.L. longshoremen on the East Coast refused to load a Yugoslav vessel which displayed the Russian hammer and sickle and posted portraits of Stalin and Tito. Their explanation: They wanted no part of any deal to move U. S. goods to Russia or any Russian satellite.)

• **Overtones**—The right-left political overtones can be heard in all maritime contract discussions. Neither pro-Curran nor pro-Bridges negotiators dare to ignore them; too much hangs in the balance. It's traditional that rank-and-file longshoremen, seamen, and other maritime workers like tough, aggressive leadership that can bring results. Both of the rival factions want to demonstrate their ability to be just a little tougher, to get just a little more. The prize: popular support which might decide what is now an evenly balanced contest.

This union struggle is the big reason why ordinary dispute-settling techniques, an antistrike injunction, or perhaps even a contract do not necessarily mean labor peace on the seas.

• **Tanker Pact**—Here's an example: Last week Curran's right-wing bargaining

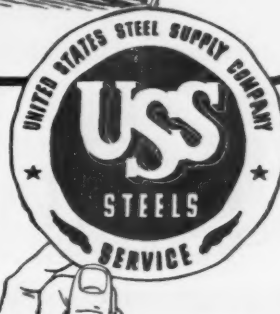
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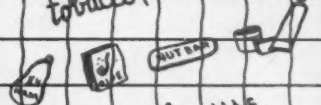
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team in N.M.U. negotiated a new contract with 11 tanker companies. The pact calls for an average \$5-a-month raise for unlicensed personnel. It continues the present hiring-hall system of manning vessels (BW—Apr. 10'48, p104) until a "competent court" can decide whether or not hiring-halls are legal under the Taft-Hartley law.

Last year a similar tanker agreement broke a contract deadlock; dry-cargo settlements followed the tanker pattern. The story this year was different.

• **Reaction**—When New York tanker men got the contract for ratification, the pro-Bridges left was primed for a fight. In the meeting, the left-wingers tossed a barrage of pennies at Curran to protest the amount of the pay boost. A sell-out to the bosses was charged. Tempers flared so hot that Curran left the union hall with a police escort.

The status of the tanker contract is still uncertain. Curran forces claim that it has been ratified despite the New York demonstration; leftists say the agreement hasn't been approved.

• **Dry-Cargo, Too**—The tanker demands were essentially the same as those being made on dry-cargo shippers: a big wage increase, preferential hiring, improved work conditions. A dry-cargo settlement along the lines of the tanker deal would undoubtedly have just as stormy a reception.

Curran's agreement to obey a federal antistrike injunction this week got equally rough treatment from the left. Frederick N. "Blackie" Myers (Bridges' choice as head of N.M.U. to replace Curran) charged that "capitulation to the shipowners' injunction is a betrayal of every tradition [of] the labor movement." Myers is opposing Curran in a union election which comes to a climax this month.

• **Leadership Offer**—N.M.U.'s leftists offered seamen their leadership for a strike—with or without Curran support—as soon as the injunction order expires, "if no acceptable contract is reached by that time."

Bridges' union and four other smaller groups also agreed to heed requirements of the federal writ. However, Bridges' longshoremen on the West Coast didn't surrender without token resistance. A "safety" campaign on the docks resulted in short stoppages, many slowdowns there. Bridges' statements had the same tone as those from N.M.U. leftists: a strike—and a "lollapalooza"—will come the minute injunction bars are off.

• **Possible Time-Lag**—The exact date isn't certain. Initial injunctions were temporary—preludes to Taft-Hartley 80-day strike bans. The showdown, thus, may be delayed until late August or September. How strenuous it will be at that time will hinge on Curran's fate in the N.M.U. election.



NAVY LABOR MAN Carl Schedler watches suppliers' employee relations.

Military vs. Strikes

Armed services reviving wartime labor-relations divisions to deal with shutdowns that threaten military procurement.

Military labor-relations men who put their uniforms away in moth balls after the war were airing them out this week. Now, as during the war, the aim is to keep labor disputes from upsetting production schedules.

• **Boeing Strike Hurts**—An important strike is making Navy, Army, and Air Corps deeply conscious of labor problems: Operations at the big Boeing Airplane Co. plant in Seattle have been curtailed. The strike is now two months old (BW—May 8'48, p112). Work on B-50 Superfortress bombers has been delayed.

This week, the National Labor Relations Board went to court to speed a settlement. NLRB General Counsel Robert N. Denham got a temporary restraining order against Boeing's refusal to bargain with the International Assn. of Machinists (Ind.).

• **Independent Action**—NLRB's action at Boeing didn't alter in the least the armed services determination to revive labor-relations branches. They want to get their own trouble-shooters ready for action.

The Navy already has taken steps to breathe life into its wartime Labor Relations Dept. The Army and Air Corps have such refurbished departments in the planning stage. The Army already has put a few labor experts to work on a per-diem basis. The over-all Dept. of National Defense watches labor problems through the eyes of John H. Ohly,

one of three special assistants to Secretary of Defense Forrestal.

• **The Navy's Man**—The Navy appointed Carl Schedler, a Washington labor arbitrator, as top industrial and labor-relations adviser last December. He is attached to the office of Under Secretary of the Navy W. John Kenney as a civilian adviser. So far, Schedler is working on a per diem basis without a staff. There have been many applications for jobs. But no final decision has been made yet on how the staffing will be done—whether via civilian labor advisers or uniformed labor-relations officers.

One possibility: Some of the 100 wartime Navy labor-relations officers—now naval reservists—will be called to Washington for two-week "cruises." Among the topflight men in the field who have reserve status; Francis A. O'Neill, member of the National Mediation Board; Chairman Paul Herzog and James J. Reynolds, Jr., of the National Labor Relations Board; Joseph L. Miller, Washington labor consultant and former assistant to presidential aide John Steelman.

• **Duties**—Schedler's job is to see that the flow of supplies and materials from private contractors isn't interrupted by labor troubles. He also advises heads of Navy bureaus on labor matters. When a labor dispute threatens to interfere with Navy contracts, Schedler works through government agencies—such as the Federal Mediation & Conciliation Service or NLRB—in trying to get a settlement.

• **Important Controversy**—Outside the armed services, government interest in the Boeing dispute has grown for at least two reasons:

(1) The length of the strike, and its possible effect on the new aircraft program.

(2) Boeing's alleged refusal to cooperate with FMCS.

• **No Compulsion**—Cy Ching, FMCS director, recently complained that the Taft-Hartley law imposes no sanctions against parties that refuse to participate in conferences called by his office. Ching sent several telegrams asking Boeing to meet with an FMCS conciliator—with or without the union being represented. He said that Boeing refused. That bars conciliation work because FMCS can't compel either an employer or a union to meet with it. Under the injunction, Boeing can still cold-shoulder Ching, although it must meet the union.

The company took the position that it wouldn't bargain with I.A.M. as long as the local union's leadership remained unchanged. It contended that it would talk contract terms only "on a basis that will permit us to compete and to operate efficiently." It explained that it hadn't negotiated with its I.A.M. local solely

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• **Strike Background**—I.A.M. members struck at Boeing in a dispute over a seniority clause. The company wants a "modified seniority system to build an efficient working organization." The union demanded retention of a clause drawn during the war. Wages and other issues were secondary.

Boeing accused I.A.M. local officers of ordering a strike in violation of the T-H act (required notices weren't given, according to the company) and of the contract. The company has kept its gates open for workers willing to cross picket lines—and it recently granted a 15¢-an-hour raise to those who will do so. The strike affected about 14,800 hourly paid employees; last week, about 1,600 were crossing picket lines.

Third Round Has Big Week

Firestone's 11¢ raise may set new rate for the rubber industry. Kaiser-Frazer drops incentive-bonus plan for pay hike, social security. Still unsettled: Alcoa, Ford, and Westinghouse.

The third wage round rolled on this week. Agreements in the 11¢-to-13¢ pattern spread into the rubber industry: Firestone Tire & Rubber Co. and United Rubber Workers (C.I.O.) signed a 21-month contract. The 11¢ hourly raise it provides was quickly interpreted in Akron as the probable price for new contracts—and labor peace—for the entire industry.

• **Week's Developments**—The rubber settlement was a high spot in a week of significant wage moves:

Aluminum Co. of America negotiations with the United Steelworkers of America (C.I.O.) reached a critical—and perhaps strike-point. The company offered an 8% raise, with a 9¢-an-hour minimum. The union wants 13¢, and "adjustments of rate inequities." The steel union's pact with Alcoa doesn't bar a strike this year—as basic steel strikes are barred.

Ford Motor Co. began 1948 talks with the United Auto Workers (C.I.O.) in Detroit. Rank-and-file unionists at Ford were restive and aggressive, the company's hold-the-line position appeared shaky.

Westinghouse Electric's 6% raise-plus-insurance plan was rejected as "wholly inadequate" by the United Electrical, Radio & Machine Workers (C.I.O.). Meantime, U. E. formally accepted terms offered last week by General Electric (BW—Jun. 12'48, p26).

Kaiser-Frazer substituted a wage hike and social security program for its incentive-bonus plan. U.A.W. approved.

Small steel plants in the Philadelphia area gave the United Steelworkers wage hikes ranging from 5¢-to-12½¢. Nationally, the union reported "small steel concerns seem more willing to go along with wage negotiations than the bigger firms." U. S. Steel, however, was reported getting ready to give a voluntary pay boost.

Studebaker, Nash-Kelvinator and others settled for 13¢ hourly increases—the Chrysler pattern was attracting a



COOLING OFF after contract talks: U.R.W.'s L. S. Buckmaster (left) and Firestone's W. R. Murphy, director of industrial relations

greater following than G. M.'s formula (BW—Jun. 5'48, p94).

• **Big News in Rubber**—But the big news was the Firestone settlement. Climaxing eight weeks of off-and-on negotiating, it came as a compromise based on the G. M. 11¢ raise figure, but it ignored the cost-of-living index tie-in and annual improvement factor.

The Firestone increase will be shared by 23,000 production workers in eight plants. The average wage nationally will be upped from \$1.57 to \$1.68 an hour. The company estimates this will raise its annual payroll \$4,762,000. Although the contract runs until Mar. 1, 1950, the wage clause can be reopened by either party with 60-day notice after Apr. 14, 1949.

Firestone agreed on a master contract for its eight plants for the first time this year.

• **Other Companies**—The U.R.W. quickly tossed the Firestone settlement

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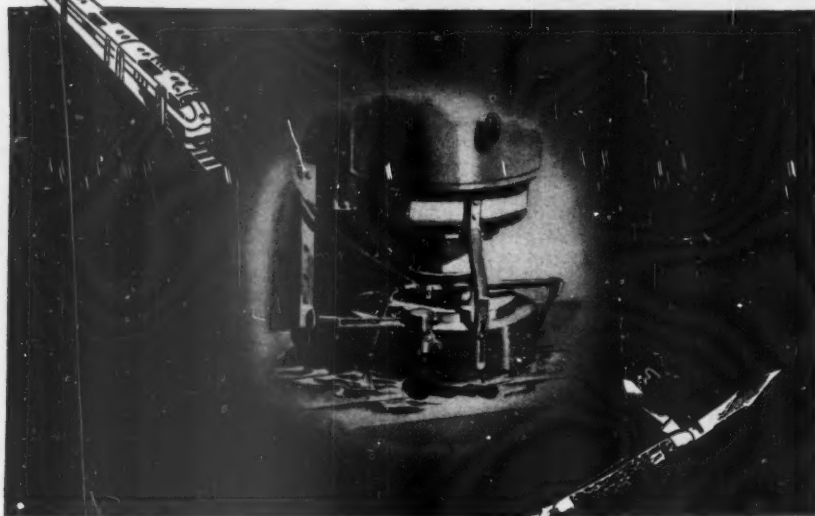
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terms at other "Big Four" rubber companies—U. S. Rubber, Goodyear, and Goodrich. U. S. Rubber and Goodyear are negotiating entire contracts this year, and the wage question hasn't come up seriously so far. Goodrich contract talks broke off just before the Firestone settlement. At midweek, it looked as though bargaining would be resumed on the basis of the "pattern" agreement. To be ready for action—and to increase pressure on Goodrich—U.R.W. took a strike vote.

Originally, the rubber union asked the Big Four for a 30¢ hourly pay boost. Until Firestone settled, the top offer from management was 8¢ by Goodrich. • **No More Kitty**—Kaiser-Frazer's 1948 contract with U.A.W. stirred special interest for two reasons: (1) It threw out the K-F. production "kitty" plan under which workers divided \$5 for every car produced (BW—Dec.27'47,p66); (2) it set up for the first time in the automotive industry a major social security program financed entirely by management.

The K-F. contract grants a 13¢ increase for hourly paid employees, and 9% for salaried employees. The company will put an additional 5¢ an hour into a new social security fund, to be jointly administered by K-F. and the U.A.W. It will be used to pay costs of hospitalization, sickness and accident insurance, prepaid medical service, life insurance, and other social security benefits.

Costs of the old production "kitty" program came to about 3.6¢ per hour for covered employees. Last December, workers shared \$748,665, got an average \$72.16 each in pre-Christmas bonus checks. The "kitty" died as of May 31, with about \$500,000 accumulated. Checks will be distributed to 10,000 eligible employees in August.

• **U.A.W. Praises Plan**—U.A.W., which has social security plans as one of its goals, praised the K-F. plan as: "The first step of importance toward a U.A.W.-wide social security program. "It would have," said the union, "immediate significance in U.A.W. negotiations with other employers."

One sure place where the plan will come up will be in conferences of the G. M. Union-Management Social Security Study Committee. This group was set up under the 1948 contract to plan and develop a social security program for G.M. workers.

The Pictures—Acme—112; Ewing Galloway—102 (top left); Harris & Ewing—23; Int. News—102 (bot. right); Bob Isear—39, 40, 42; Keystone—120; Wide World—34 (bot.); McGraw-Hill World News—118.

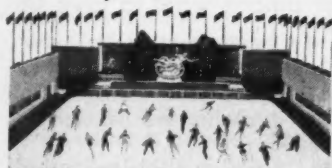
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In-Plant Feeding Holds Gains

Survey shows neither bosses nor unions want to give up program which grew during war; agree it's here to stay.

There is one labor matter on which industrial workers and bosses definitely see eye to eye: in-plant feeding. A survey, reported recently in the Harvard Business Review, shows that this field is now "remarkably free from serious controversy." Both sides recognize industrial feeding as an important condition of employment.

• **Growth**—The survey was completed in January of this year by James M. Vicary. His aim: to find out just what

plant workers and plant managements think about a practice that has recently mushroomed.

During the war, in-plant feeding had its greatest growth (BW—Sep. 1'45, p65). By 1944, eight out of 10 factories employing 1,000 or more workers had food-service facilities.

Vicary found:

UNIONS now look on in-plant feeding as a "working condition" which man-

agement should keep going; 64% of the labor group surveyed said that "industry in general will be expected to provide feeding facilities for its workers in the future."

MANAGEMENT sees many advantages in factory-feeding—it's a timesaver, cuts absenteeism, helps boost factory output in other ways. A large majority (83%) of the bosses polled agreed that "in-plant feeding as an industrial development is here to stay."

• **Second Place**—Both unions and management placed plant cafeterias in second place among activities—not connected with wages and hours—useful in promoting better employee morale. Top spot on the union list: management encouragement of unions. First on management's list: promotion of sports.

Both union members and management are convinced that company cafeterias should be the responsibility of the company. Labor has some clear-cut ideas about how cafeterias should be run; but it doesn't want to undertake joint operation.

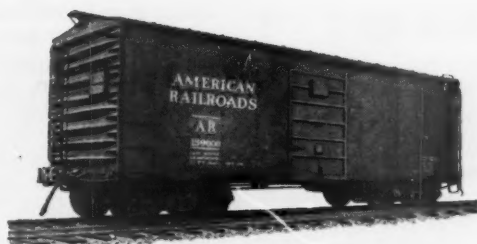
• **At-Cost Operation**—Food should be priced so that the cafeterias can be operated at actual cost. Workers surveyed did not favor a company-subsidized cafeteria, even if it would mean low-cost food. Reason: It might wind up as a company bargaining point.

Both labor and management said that cafeterias should not sell beer. Union members said workers should be encouraged to play table games (like cards or checkers) at cafeteria tables—with gambling prohibited. Management didn't agree; it's afraid that a "let's-finish-this-game" attitude might result.

• **Mixing at Meals**—An unusually large volume of comment came from another question: Should workers and management mix at meals? Both said it would be a good thing once in a while.

Vicary found that there is a trend away from company-operated cafeterias. Management now leans toward letting someone run the restaurant "who knows his business as we know ours." But most companies shy away from the once prevalent practice of giving cafeteria concessions to outsiders. Management found that it still got blamed for food, price, and service abuses by concessionaires; hence it wants to keep some say-so about cafeteria operation.

• **Operation, Supervision**—So the trend now is toward professionally managed plant restaurants supervised by the factory personnel manager. The contractor gets a guaranteed fee, based on a stipulated per-employee cost of service. Any operating loss is underwritten by management—which can decide whether the contractor should make income and costs meet by serving beans as the main dish on a 45¢ meal, or whether beef should be served with the employer making up the deficit.



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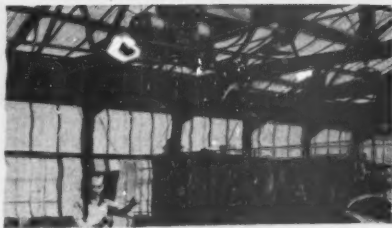
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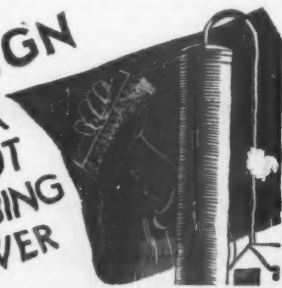


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For Professionals

New NLRB ruling gives employees in professional jobs right to sever connections with nonprofessional unions.

Under the Taft-Hartley law, professional workers can't be dumped against their will into bargaining units with nonprofessionals. For a year, the National Labor Relations Board has applied this rule only in cases involving the setting up of new units. Last week, NLRB did some broadening.

• **Decision**—It decided: "The same principles apply in severing a group of professional employees from an established bargaining unit . . . as apply in establishing new bargaining units."

The decision came on a petition for a decertification election, filed by engineers and right-of-way agents employed by the Illinois Bell Telephone Co., of Chicago. NLRB ruled unanimously that the election should be held.

• **The Setup**—Three locals of the International Brotherhood of Electrical Workers (A.F.L.) now represent the engineers and agents—who are lumped into a bargaining unit of about 9,000 Plant Dept. employees. Many of the 271 plant engineers and 15 right-of-way agents signed the petition for the decertification poll. I.B.E.W. opposed it, arguing that NLRB should require signatures of 30% of all employees in the bargaining unit.

NLRB rejected this argument. It decided that Congress intended to prevent relatively small numbers of professional workers from being outvoted by larger numbers of nonprofessionals. This applies, said NLRB, whether the issue is including professional workers in a bargaining unit, or keeping them in when they already are a part of one.

• **The Poll**—The plant engineers and right-of-way agents will be polled on whether they want to be represented by I.B.E.W. or by no union.

Another question came up in the Illinois Bell case: What are the qualifications of a "professional" employee?

NLRB answered that they didn't hinge on a college degree, or a state professional license. Instead, the test must be an employee's duties. It held that job requirements of Illinois Bell plant engineers and right-of-way agents meet T-H standards for professionals.

• **Different Standards**—These standards aren't necessarily the ones set up under the Fair Labor Standards Act. In two recent decisions, NLRB has declined to follow job classifications laid down by the wage-hour administrator. The board decided that estimators for the Austin Co. (Seattle construction firm) are "pro-

fessional employees"—though workers like them had been nonprofessionals under the wage-hour law. It made a similar ruling involving Roane Anderson Co. employees at Oak Ridge, Tenn.



NEW I.L.O. TOP MAN, David A. Morse, leaves two jobs open in Labor Dept.

American Becomes Director of I.L.O.

Washington labor and political observers were saying this week that David A. Morse "fled a sinking ship for security." What they meant was that Morse had taken a job as director-general of the International Labor Organization, when he might have got in a bid to become the new Secretary of Labor.

• **Good Chance**—The labor secretaryship became vacant last week when Lewis B. Schwellenbach died. Because of the way Truman has been promoting assistants, Morse, 41-year-old Under Secretary of Labor, was figured to have a good chance of becoming Schwellenbach's successor. Formerly general counsel for the National Labor Relations Board, Morse became a top aide to Schwellenbach in June, 1946.

I.L.O.'s director-general draws \$20,000 a year, and it's tax-free. Moreover, a cabinet appointment (paying a taxable \$15,000) now might turn out to be only a six-month hitch; I.L.O.'s top man has a five-year term.

• **Candidate**—Morse became an active candidate for the I.L.O. job when it was announced that Edward Phelan, of Ireland, planned to retire in July, at the age of 60. Schwellenbach's death didn't alter Morse's decision.

Morse's shift to the international, tripartite I.L.O. leaves the two top Labor Dept. spots to be filled.

INTERNATIONAL OUTLOOK

BUSINESS WEEK

JUNE 19, 1948



The U. S. is easing up its embargo on exports to Russia.

The controls slapped on Mar. 1 are still in effect. And nothing is being said officially about any change in policy.

But look for a more liberal application of the controls—and an upturn in shipments to Russia during the third quarter. (Exports during the second quarter, of course, will show a big drop from the first.)

The policy on trade with Russia and eastern Europe is this:

- (1) Allow exports of "safe" goods—tobacco, kitchenware, vitamins, movie films, hand tools.
- (2) Prohibit shipments of war stuff—aircraft engines, explosives.
- (3) Case-by-case treatment of everything else—industrial machinery, transport equipment, mining equipment.

Rule No. 3 was invoked in O.K.'ing about \$4-million worth of machinery for Finland.

And No. 3 will be crucial in trade with Russia, for Russia wants machinery. During the first three months of 1948, over 90% of U. S. exports to the U.S.S.R. was industrial stuff.

Machine tool builders who have been hung up on Russian orders should find this case-by-case rule a big help. Unless their machines have a direct war-making potential, they'll probably get licenses before long.

Firms that don't get bailed out this way shouldn't give up hope. Either ECA or RFC is almost sure to buy up machinery that was contracted for before Mar. 1. Congress will write the answer into the foreign aid appropriations act.

The U. S. diplomatic approach to Russia is on a case-by-case basis, too. This is meant to test the Soviet peace offensive (BW-May22'48,p115).

The first result came this week when Moscow agreed to a conference on Danubian navigation. The Russians also agreed to Secretary Marshall's request that Austria sit in on the meeting.

The conference will be held about the end of July. It will include the Danubian countries plus the U. S., Russia, Britain, France.

W. Averell Harriman, ECA boss in Europe, is sniffing out potential European supplies of scarce goods.

For the moment he's not telling what's turned up. But here are some items he couldn't miss:

- (1) A million tons of European coal is going begging for customers who will pay dollars.
- (2) Belgium has extra steel but the price in Athens is about double the figure in Brussels.
- (3) Steel is piling up in Italy because of a general production slump.

The big thing gumming up Europe's trade is the breakdown in the payment system (BW-Jun.12'48,p117). Sky-high prices don't help, either.

Officials in Harriman's Paris office talk of direct U. S. pressure on exorbitant prices. And they hope that ECA dollars will soon be percolating fast enough and far enough to ease the payments problem.

ECA in Washington has begun to do something about the stagnation of intra-European trade (BW-Jun.12'48,p117).

Since the beginning of June, Hoffman has made offshore purchases in

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
JUNE 19, 1948

Europe amounting to almost \$7-million. And a lot more are in the works.

The biggest single purchase has been for western Germany—\$3-million. It consisted of fruits and vegetables from Italy.

Austria gets \$1.2-million for Norwegian whale oil and Greece \$1.2-million for coal from western Germany.

Purchases in Argentina are still hanging fire. But ECA has begun off-shore buying in other Latin American countries.

Venezuelan crude and fuel oil worth \$5-million will go to Italy.

Greece can buy \$2.9-million worth of kerosene, fuel oil, gasoline, lubricating oil, and asphalt in the "U. S. and other western hemisphere countries and the Persian Gulf."

France is getting \$840,000 of sesame seeds in Nicaragua; Trieste, \$116,000 of Mexican canned beef. (In both cases, ECA got a "very good break" on prices.)

Moscow has always boasted that everyone in Russia has a job and likes to work for the state.

But 2-million workers—many of them skilled—have signed up in Russian industry since the start of 1948. And they weren't demobilized troops.

Here's the explanation: Before last fall's ruble reform, some workers refused to hold down regular jobs. The ruble didn't buy enough to lure them into steady employment.

Thus the ruble reform is paying off—at least to the extent of increasing the industrial work force.

Britain's Labor government is worried that its anti-inflation policy has gone too far. It's now cutting purchase taxes to revive demand and stem unemployment. A recession was needed all right. But controls are so rigid in Britain that there's little chance for a healthy readjustment.

U. S. and Canadian locomotive builders have just landed a \$25-million order from India. The New Delhi government is doing the buying—200 broad gauge engines.

Baldwin will supply 100. Montreal Locomotive and Canadian Locomotive will build the rest. Delivery is set for 1949. The purchases are part of India's \$1-billion seven year program for rail transport development.

Plans for the expansion of India's steel industry are moving forward.

The Indian government is now set to call in Koppers Co., Inc., and Arthur G. McKee Co.—plus Britain's International Construction Co., Ltd.—to handle the big state prospect.

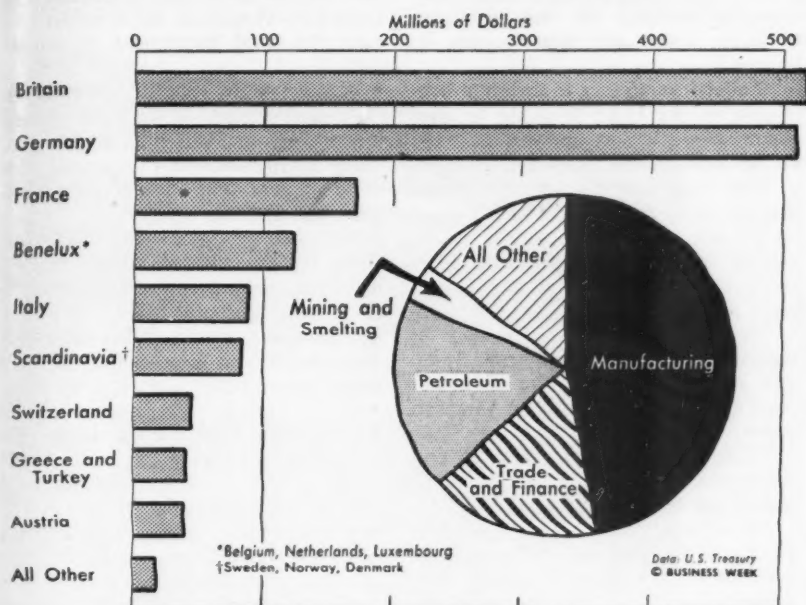
The three firms would make a survey, then share in the construction. One of the first problems is to decide whether the government should have a single million-ton plant (cost, \$480-million) or two 500,000 ton plants (cost, \$225-million each).

Expansion of India's existing steel facilities is also under study.

The Tata Iron & Steel Works at Jamshedpur wants to borrow \$60-million from New Delhi to add 600,000 tons to its capacity. The Steel Corp. of Bengal wants \$51-million to increase its output by 300,000 tons.

If these projects get approval, Koppers, McKee, and International Construction may act as consultants.

BUSINESS ABROAD



PREWAR PRIVATE INVESTMENT by American companies in Marshall Plan countries totaled some \$1.6-billion, according to the latest complete census (1943). Most of it was concentrated in Britain and Germany; manufacturing had by far the biggest slice

"Invest in Europe," Says ECA

Hoffman believes European recovery is more likely if U. S. industry takes a direct part in boosting production. As incentive, he will guarantee conversion of foreign currencies into dollars.

The U. S. people are staking a lot of money on the four-year European Recovery Program—about \$5-billion for the first year alone. Will U. S. business follow suit by increasing its investment in western Europe's industry (chart, above)?

That's a question that Paul Hoffman's Economic Cooperation Administration is puzzling over now. ECA would like to see a big boost in American direct investments in the Marshall Plan countries; this would be a sure way to jack up production there. And ECA thinks it has the kind of special incentive that will turn the trick.

• **Guarantee**—The incentive is an exchange guarantee that can be used to cover up to \$300-million of new U. S. private investments. The guarantee is written into section III (b) (3) of the Foreign Assistance Act (which set up ERP). It runs for 14 years. It assures convertibility into dollars of any local currencies (but not more than the amount of the original dollar investment) received as income or through sale of capital assets.

What this boils down to is that ECA

guarantees the dollars put into any project approved by it and by the Organization for European Economic Cooperation (BW—May 29 '48, p109). Suppose an American company builds an approved tractor plant in Britain at a cost of \$600,000 (£150,000). Then, five years later, the U. S. owner sells the plant for £200,000, but is prevented by British exchange rules from converting the money into dollars. ECA will convert the pounds into dollars for him—but only up to \$600,000.

• **Income Factor**—But suppose he made a total profit of £25,000 (\$100,000) in the five years. Will the ECA guarantee still hold for the full amount? There are two answers:

(1) If ECA has converted his profits from pounds into dollars, it will deduct the amount from its guarantee—in this case \$100,000.

(2) If he has converted his profits himself without help from ECA, ECA may still be willing to guarantee the full \$600,000. It hasn't made up its mind on this point yet.

• **Few Takers So Far**—ECA hasn't been swamped with requests for coverage

under this special brand of exchange insurance. It didn't expect to be; it figured that U. S. executives in most lines of business would first want to see ERP get off to a good start. But Hoffman's office has had inquiries from about 50 firms to date.

Oil companies have taken the lead. Other industries include rubber, food processing, container manufacturing. Banks have also made inquiries, presumably for their clients. And there was one query about setting up a ready-to-wear clothing business in western Germany. Amounts involved ranged from \$10,000 to more than \$1-million.

For U. S. oil companies the guarantee is almost a natural. One of the high spots of ERP is the plan to increase Europe's use of oil by 110%. And many of Europe's refineries are owned or controlled by U. S. companies such as Standard of New Jersey, Standard of California, and Texas.

• **Possible Projects**—London reports say that Standard of New Jersey wants to use the ECA guarantee for at least one major project—the \$10-million Southampton refinery planned by its subsidiary, Anglo-American Oil. At the moment, actual construction is being held up for lack of steel from the United States. But it's a safe bet that, if ECA approves this development, it will give an O.K. both on the guarantee and on the steel.

Some of the other American companies who are interested include:

Jaeger Mfg. Co., of Columbus, Ohio, maker of cement-mixing machinery, mobile air compressors, and paving equipment. Jaeger has seriously considered putting up a plant in Europe under the ECA guarantee. It has shelved the plan temporarily, but would pick it up again if its volume of business in Europe increases substantially.

Adamson United Co., of Akron, Ohio, maker of basic machinery for rubber factories. Adamson has looked into the matter, but doesn't know yet how ECA will receive its project.

Sylvania Electric Products, Inc., of New York. This company would like to get in on the guarantee if it covers an investment in know-how. Sylvania is giving technical help to British and French industry, and is getting paid with an interest in the business rather than in cash.

U. S. Time Corp., of Waterbury, Conn., which has just established a watch factory in Dundee, Scotland. Company officials have asked ECA if they can qualify even though they launched their project before Congress passed the Foreign Assistance Act. (The answer is likely to be no.)

• **Reservations**—A cross-country survey just made by Business Week reveals



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PIONEERS AND LEADERS IN
Industrial

why American business is going slow on new investments in Europe. Here are some typical reactions to the guarantee:

"We're too busy trying to supply the domestic demand for our products to worry about the opportunities in Europe."

"Trained manpower is already a bottleneck in the U.S.; it would be just about impossible to find the men to set up overseas operations."

"The guarantee against losses through exchange controls doesn't make up for the other risks involved in investing today in Europe. The guarantee doesn't cover any increase in the value of the investment."

"We prefer to make licensing arrangements with foreign companies. We can supply the entire European market with exports from our American plants."

"This guarantee is just more government paternalism; the taxpayers' money should not be used this way."

"We'll wait for a while to see how ECA's whole program works out."

• **Unsettled Questions**—Actually, ECA doesn't know itself how the guarantee will work in each case. Contracts between Hoffman's office and investing companies will have to be tailored to each particular case. And ECA still has to settle some policy questions before it does any contracting at all.

Here are some of the unsettled issues:

• Will the investment of know-how by itself, as in the Sylvania case, make a U. S. company eligible? The chances

are that it won't. But if know-how is combined with a cash investment, then its value will probably be taken into account. For example, if machinery sent abroad is worth \$5-million and know-how \$1-million, ECA might consider the total investment to be \$6-million.

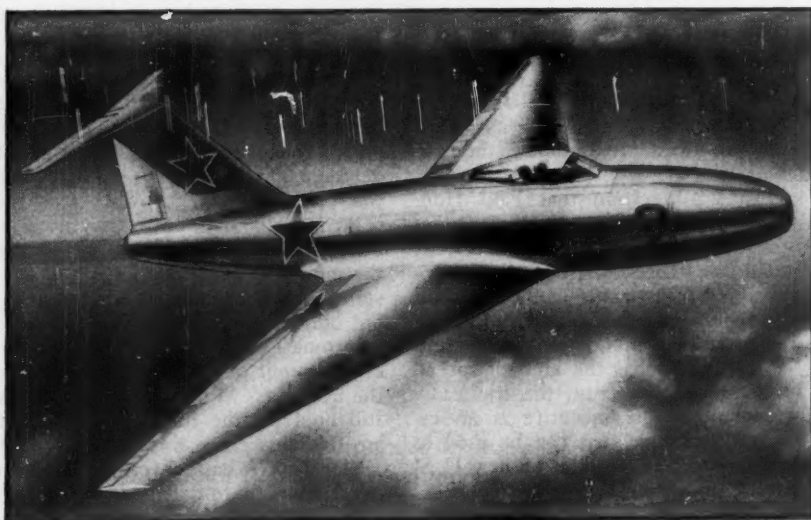
• Will ECA give a 100% guarantee in each case? Or will it limit the guarantee to 75% or 50%? It might even make it 100% in one case and only 50% in another. The act gives Hoffman latitude "up to 100%."

• Will part of the \$300-million maximum be earmarked for each country, or will it be proportioned according to the general European need? The average company would rather invest in Belgium than in Greece; but the need might be greater in Greece.

• Will a limit be placed on the amount to be loaned to a given industry? Oil could easily absorb a large part of the funds. Then there wouldn't be much left for other industries.

• Will a distinction be made between companies that have long invested abroad and those that would be newcomers? There's some thought that oil companies, for example, are bound to invest regardless of the guarantee. Hence there might be a tendency to concentrate on companies to whom the guarantee makes all the difference.

• **Flexibility**—Whatever decisions it makes on these questions, ECA will leave itself as much freedom of action as possible. Hoffman is a great believer in flexibility and a case-by-case approach.



New Soviet Jet Plane Follows German Design

This Russian jet fighter (a research model) is one of two versions of the German DFS 346 now sporting the Red Star. (This is an aviation engineer's drawing based on smuggled-out motion pictures.) The Rus-

sian press reported that on May Day the plane flew over Moscow "at the speed of sound." The Germans never completed the DFS 346. So the Soviets took it over, complete with its engineers.



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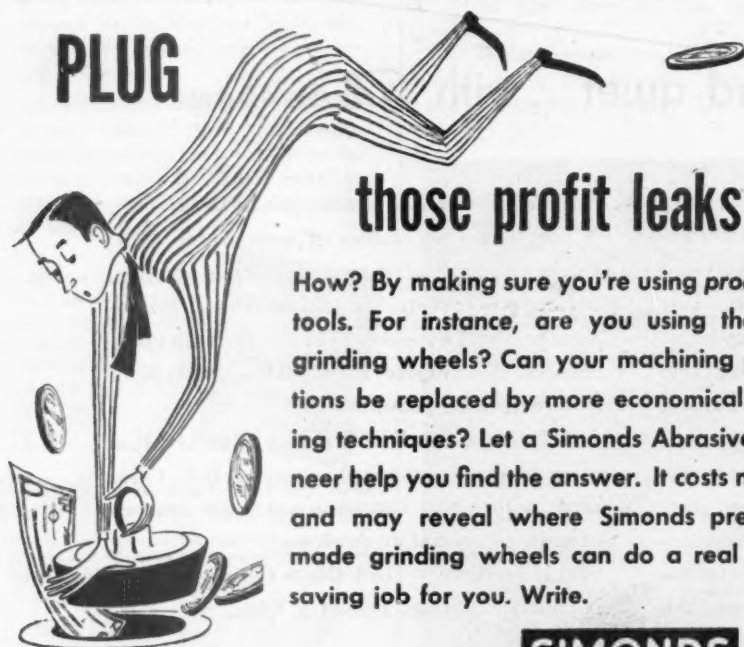
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RUHR STEEL: Is it headed for . . .

Nationalization?

There's a battle brewing over the Ruhr steel industry: U. S. officials say the British are trying to nationalize it.

DUSSELDORF—British and United States occupation authorities are squaring off for a showdown over the Ruhr steel industry. The issue at stake is nationalization.

U. S. officials on the spot are firmly convinced that the British are using cartelization to rig the industry for state ownership. For the past month the issue has been building up increasing tension between the two powers.

Now it looks pretty certain that the U. S. will counter the British moves by demanding a voice in the management of the steel industry. It will undoubtedly ask for much the same kind of joint control over Ruhr steel that it put through in the case of Ruhr coal (BW—Sep. 20 '47, p109).

• **The Odds**—But the question is: How far will the U. S. get with its stand? Right now, it doesn't look as though it will get too far.

It is true that as long as it can bring Marshall Plan pressure to bear, the U. S. will have a chance to make its views on nationalization felt around a conference table. But there's another important consideration: The German Social Democrats and unions are going to keep the public ownership issue very much alive. As long as these elements are western Germany's strongest bulwark against Communism, the U. S. may decide to tread lightly.

• **"Operation Severance"**—The British have been doing their job on Ruhr steel through "Operation Severance,"

ostensibly a decartelization program. Under it, the British have:

(1) Separated 20 steel producing plants—representing 80% of the Ruhr steel industry—from their old combines. (Another 15% of the industry is in the process of similar reorganization.)

(2) Placed the segregated plants and their labor forces at the disposal of 30-odd so-called "reception companies," which are temporary corporate devices. They are capitalized at 100,000 marks and are responsible to the British military government's North German Iron & Steel Control. This, in effect, puts ownership of the Ruhr steel industry on ice pending further developments.

The reception companies are run by a board—usually numbering 11 persons—on which labor and management are equally represented. The president of the board is a member of the North German Iron & Steel trustee administration, which is manned by Germans.

• **U.S. Suspicions**—The British stress the point that the reception companies are strictly interim bodies and are not supposed to set a new pattern of ownership. But in the eyes of U.S. officials, they are tailor-made for a nationalized industry. Besides which, the British are putting less emphasis on decartelization than on separation. To the U.S. officials, this is evidence of the British intent.

The British have said that before German industry could be nationalized, the old vertical combines would have to be broken down into their basic components (steel, coal, possibly chemicals). Traditionally, nationalized industries have been organized on a horizontal basis.

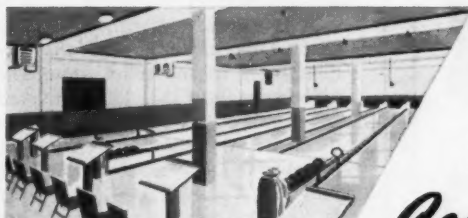
• **Negative Approach**—U.S. officials figure that "Operation Severance" is step No. 1 in this line of reasoning. Before it goes any farther, they would like to know what it will do to the Ruhr steel industries' (1) struggling production and (2) shaky financial condition.

But the U.S.—though strenuously opposing "Operation Severance"—has so far come up with no positive alternative to public ownership. Its own decartelization efforts have been notably ineffectual. Local politicians and trade union leaders don't see the U.S. brand of decartelization as a safeguard against old, pro-Nazi interests buying back into the reorganized enterprises. This has hurt the U.S. politically in western Germany.

• **Evasive Tactics**—The U. S. tried to slow down "Operation Severance" through a six-man British-American-German special advisory committee on Ruhr steel. A fortnight ago this committee fell apart because of opposition from German trade unions and the uncooperative attitude of the British.

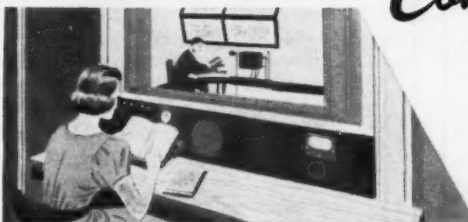
Set up in mid-April, the committee

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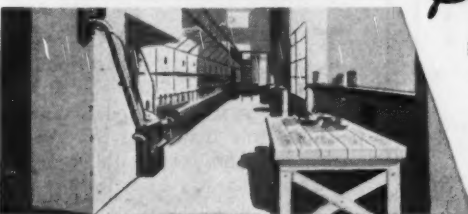


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was to have made a three-month survey of Ruhr steel factories with an eye to breaking some of the present production bottlenecks. It never had a chance.

The British apparently didn't like laying "Operation Severance" bare to U. S. scrutiny. So they put all possible obstacles in the committee's way. Example: The committee chairman, Sir

BOMBAY LETTER

BOMBAY—The most cheering remark one can make in India these days is, "It looks like rain." Everyone from millionaire to sharecropper has an eye on the western sky.

Rain means many things to many men in India. To the city dweller it means relief from the 100-degree heat that has blanketed two-thirds of his country. To hundreds of thousands of homeless refugees it means a new search—to find a dry place to sleep. To the farmers it means their concrete-hard fields will soon be softened up enough for planting.

To all India the coming of the monsoons (seasonal rains) means that in a few months the country will enjoy its annual brief respite from starvation. After harvest time, India will be able to feed its population on its own for a little while.

It will be only a breather. To be completely self-sufficient in food-grains, India must increase production 10-million tons within the next five years. After that it may have to go even higher to keep up with the growing population. Economists say India's population is rising 5-million a year—even though most of it has enjoyed few square meals in a lifetime.

THERE ARE VITAL reasons why India must get its domestic food output up. The government can't go on forever importing grain. There isn't that much foreign exchange. And even with grain imports, India has been only a step ahead of mass starvation.

Last year the government paid out \$300-million in hard currency to import and distribute foodstuffs. This year the bill may be higher. Right now there is little hope that the country can increase exports to dollar nations enough to cover this item plus all the rest it needs.

A government committee has just submitted a report on how to lick the food problem at home. To get a 10-million ton increase in food grain production the committee mapped (1) irrigation projects (for

4-million tons); (2) new land for cultivation (for 3-million tons); and (3) reclamation of waste land (for 3-million tons). The irrigation scheme is the most dubious. That takes cash.

Tractors would help a lot. But the government doesn't like the idea of becoming dependent on foreign machinery. And the universal use of tractors would upset India's traditional land-holding system. Its farms at present make up a crazy quilt of small plots.

INDIA'S GOVERNMENT (and businessmen) are doing no better at clothing the country's people than they are at feeding them. Textile prices were decontrolled (on the initiative of the late Mahatma Gandhi) after the war—on the manufacturers' assurance that they would bend over backward to keep prices down. But a recent government report gave the official wholesale price index for textiles at 385—80 points higher than a year ago (August, 1939, is the base).

FINDING A PLACE TO LIVE means another fight for Indian citizens. At one end of the scale is the socialite here who was recently arrested for getting \$12,000 on the sly to sublet his flat. At the other end are the hoards of refugees who look to the government to put a roof over their heads.

The government has grandiose plans for building whole new cities for refugees in Central India, around Delhi. But nobody has been able to work out such details as where the building materials will come from, or the water supply and transportation.

Abandoned army barracks provide something of a stop-gap, but the refugees don't like these quarters. Bombay is a case in point. As fast as refugees are herded into Kalyan cantonment (25 miles inland from the city), they filter back to Bombay. They say they can't live off each other, must stay in the city where they can find work or set up shop.

clair Kerr, took off for England in early May, had not returned by June 1.

• **Strike Threat**—The final blow came from the appointment of Dr. Hermann Reusch to the committee. Reusch is a Christian Democrat and a former director of a big Ruhr steel combine; the German bizonal economic council appointed him as a counterweight to its other appointee, Dr. Paul Bleisu, a Social Democrat and an active trade unionist.

The Social Democrats and unions couldn't stomach Reusch, who is also an outspoken critic of public ownership. So they threatened a two-day protest strike which would have tied up steel production. The council averted it by withdrawing both nominations.

Big New Paper Mill Being Built in Canada

ST. JOHN, N. B.—Construction on Canada's largest pulp and paper mill has just begun at the nearby town of Lepreau. American and Canadian interests—including a group of U. S. publishers—will put up \$65-million for the plant, which should start producing early in 1950. Plant capacity will be 350,000 tons of newsprint and kraft paper annually.

• **Nonprofit**—Recently incorporated as the Maritime Pulp & Paper Mills Corp., Ltd., the project will be operated on a cooperative, nonprofit basis. Participating publisher-investors will be permitted to buy, at cost, one ton of newsprint a year for each share of stock they hold. Thus, the publishers will buy as much stock (at \$100 a share) as the tonnage of paper they want. Under this system of financing the shareholders hope to recoup their investments in four years.

About half the money for the project will come from the sale of stock. The rest will be raised by a long-term bond issue.

• **Government Help**—The new venture will provide work for between 4,000 and 5,000 men in the mill and in the forests. So the New Brunswick provincial government is doing all it can to help the project. During construction the mill will be almost entirely exempt from taxes. After production in the mill gets started, tax evaluation will be \$500,000 (Canadian currency) for the first 15 years, \$1-million for the next 15 years.

The mill's output will be marketed mainly in the eastern U. S. and Canada. But the mill's site, on the north shore of the Bay of Fundy, lies on good trans-Atlantic and coastwise shipping routes, which may open up a big export market.

ADVERTISERS IN THIS ISSUE

Business Week—June 19, 1948

ALLEGHENY LUDLUM STEEL CORP. 41	LIBBEY-OWEI ORD GLASS CO. 119
Agency—Walker & Downing	Agency—Pull & Smith & Ross Inc.
ALLEN-BRADLEY CO. 27	MANNING, MAXWELL & MOORE, INC. 94, 112
Agency—The Fenaholt Co.	Agency—Briggs & Varley, Inc.
ALLIS-CHALMERS MANUFACTURING CO. 2, 3	MARSH & McLENNAN, INC. 92
Agency—Compton Advertising, Inc.	Agency—Doremus & Co., Inc.
AMERICAN AIR FILTER CO. 43	MIXERMOBILE DISTRIBUTORS, INC. 86
Agency—The Griswold-Eshleman Co.	Agency—Hargreaves, Adv.
AMERICAN TELEPHONE & TELEGRAPH CO. 114	MONSANTO CHEMICAL CO. 73, 4th Cover
Agency—Newell-Emmett Co.	Agency—Gardner Advertising Co.
ANCHOR POST PRODUCTS, INC. 98	MOSINEE PAPER MILLS CO. 84
Agency—Van Sant, Dugdale & Co., Inc.	Agency—Klau-Van Pietersom-Dunlap Assoc.
ASS'N OF AMERICAN RAILROADS. 111	MOSLER SAFE CO. 30
Agency—Henton & Bowles, Inc.	Agency—Albert Frank-Quentner Law, Inc.
ASS'N OF IRON & STEEL ENGINEERS. 100	MUTUAL BROADCASTING SYSTEM. 86
Agency—Walker & Downing	Agency—Schwimmer & Scott, Inc.
"AUTOMATIC" SPRINKLER CORP. OF AMERICA. 49	NATIONAL ADHESIVES. 79
Agency—Meek & Thomas, Inc.	Agency—G. M. Basford Co.
THE BAKER RAULAND CO. 78	NEW DEPARTURE DIV. OF GEN'L MOTORS CORP. 99
Agency—G. M. Basford Co.	Agency—J. M. Hickerson, Inc.
BANK BUILDING & EQUIPMENT CORP. 100	NEW YORK CENTRAL SYSTEMS. 107
Agency—Krupnick & Assoc., Inc.	Agency—Foote, Cone & Belding
BARCO OIL CO. WAX DIVISION. 104	NEW YORK STOCK EXCHANGE. 91
Agency—White Adv. Agency	Agency—Gardner Adv. Co.
RICHARD BEST PENCIL CO. 106	NORFOLK & WESTERN RAILWAY CO. 64
Agency—Samuel Croft Co., Inc.	Agency—Houck & Co., Adv.
BLACK INDUSTRIES. 74	THE OSBORN MANUFACTURING CO. 72
Agency—G. M. Basford Co.	Agency—The Griswold-Eshleman Co.
BLUTH & CO., INC. 92	OWENS-CORNING FIBERGLAS CORP. 17
Agency—Doremus & Co., Inc.	Agency—Fuller & Smith & Ross Inc.
BRIDGEPORT SAFETY EMERY WHEEL CO., INC. 108	OZALID PRODUCTS DIV., GEN'L ANILINE & FILM CORP. 54
Agency—Wilson, Haight & Welch, Inc.	Agency—Young & Rubicam, Inc.
BREUER ELECTRIC MFG. CO. 82	PENN ELECTRIC SWITCH CO. 8
Agency—Gebhardt & Brockhaus, Inc.	Agency—Lampert, Fox, Prell & Dolk, Inc.
BUELL ENGINEERING CO., INC. 101	THE PENNSYLVANIA CO. 95
Agency—Hicks & Greist, Inc.	Agency—N. W. Ayer & Son, Inc.
CANADIAN BANK OF COMMERCE. 120	PITTSBURGH STEEL CO. 94
Agency—Albert Frank-Quentner Law, Inc.	Agency—Bond & Starr, Inc.
CENTURY ELECTRIC CO. 55	PRESSED STEEL TANK CO. 83
Agency—Oakleigh R. French & Assoc.	Agency—The Buchen Co.
COLUMBIA STEEL & SHAFTEING CO. 81	PURCHASE & CONTACT ASSOCIATES. 110
Agency—Walker & Downing	Agency—C. J. Herrick Associates
COMMONWEALTH OF PENNSYLVANIA. 76, 77	PYNOL CO. 110
Agency—Ketchum, MacLeod & Grove, Inc.	Agency—Mace Adv. Agency, Inc.
CONTAINER CORP. OF AMERICA. 61	REMINGTON RAND, INC. 7
Agency—N. W. Ayer & Son, Inc.	Agency—Leoford Adv. Agency, Inc.
CROTTY BROTHERS. 44	ROBBINS CO. 122
Agency—Hlaker Adv. Agency, Inc.	Agency—Franklin Adv. Service
DAVIDSON MFG. CORP. 32	ROBBINS & MYERS, INC. 68
Agency—Almon Brooks Wilder, Inc.	Agency—Erwin, Wasey & Co., Ltd.
DEBELL & RICHARDSON, INC. 82	SAFEMAN STORES, INC. 110
Agency—Wm. B. Remington, Inc.	Agency—Albert Frank-Quentner Law, Inc.
THE DEMING CO. 42	SCIENCE ILLUSTRATED. 106
Agency—G. M. Basford Co.	J. P. SEEBURG CORP. 37
A. B. DICK CO. 35	Agency—The Buchen Co.
Agency—Fuller & Smith & Ross Inc.	THE SHEFFIELD CORP. 6
DODGE MANUFACTURING CORP. 62, 63	Agency—Witte & Burden, Adv.
Agency—Lampert, Fox, Prell & Dolk, Inc.	SHERWIN-WILLIAMS CO. 60
DOW CORNING CORP. 34	Agency—Newell-Emmett Co.
Agency—MacManus, John & Adams, Inc.	SIMONDS ABRASIVE CO. 120
DUNBAR GLASS CORP. 40	Agency—Fox & Mackenzie, Adv.
Agency—Advertising, Inc.	THE W. W. SLY MFG. CO. 116
E. I. du PONT de NEMOURS & CO. 46, 47, 87	Agency—The Hayless-Kerr Co.
Agency—Batten, Barton, Durstine & Osborn, Inc.	A. O. SMITH CORP. 38
EASTMAN KODAK CO. 113	Agency—Hend, Hurst & McDonald, Inc.
Agency—J. Walter Thompson Co.	THE SOUNDSCRIBER CORP. 97
EBCO MANUFACTURING CO. 104	Agency—Erwin, Wasey Co., Inc.
Agency—Wheeler, Knight & Gaiety, Inc.	SPERRY GYROSCOPE CO. 29
EBERHARD FAPER PENCIL CO. 108	Agency—Chas. Dallas Reach Co., Inc.
Agency—Hicks & Greist, Inc.	STAR MANUFACTURING CO. 89
ELECTRIC EQUIPMENT CO. 122	Agency—Erwin, Wasey & Co.
Agency—Charles L. Rumrill & Co.	STERLING ELECTRIC MOTORS, INC. 88
ELJER CO. 98	Agency—Heints & Co., Inc.
Agency—Fuller & Smith & Ross Inc.	F. J. STOKES MACHINE CO., INC. 32
EXPERIMENT, INC. 112	Agency—John Mather Lupton Co., Inc.
Agency—D. D. Staples Assoc.	THE STUDEBAKER CORP. 3rd Cover
FANSTEEL METALLURGICAL CORP. 71	Agency—Boche, Williams & Clear, Inc.
Agency—Merrill Symonds, Adv.	THE TEXAS CO. 18
A. B. FARQUHAR CO. 84	Agency—Newell-Emmett Co.
Agency—Van Sant, Dugdale & Co., Inc.	TODD CO., INC. 85
FOLLANSBEE STEEL CORP. 50	Agency—The Merrill Anderson Co.
Agency—Ketchum, MacLeod & Grove, Inc.	TOWMOTOR CORP. 4
THE GARDNER-RICHARDSON CO. 75	THE TRANE CO. 121
Agency—Stockton, West, Burkhart, Inc.	Agency—The Cramer-Krasselt Co.
GAYLORD CONTAINER CORP. 57	TWIN DISC CLUTCH CO. 86
Agency—Oakleigh R. French & Assoc.	Agency—Spencer W. Curtis, Inc.
GEN'L ELECTRIC CO., CONSTR. MATS DIV. 53	E. W. TWITCHELL, INC. 96
Agency—G. M. Basford Co.	Agency—Gray & Rogers
GENERAL ELECTRIC X-RAY CORP. 67	UDYLITE CORP. 12
Agency—N. W. Ayer & Son, Inc.	Agency—Grant Advertising, Inc.
THE B. F. GOODRICH CO. 1	UNION BAG & PAPER CORP. 5
Agency—The Griswold-Eshleman Co.	Agency—Roy S. Durstine, Inc.
HAMMERMILL PAPER CO. 93	U. S. STEEL SUPPLY CO. 103
Agency—Batten, Barton, Durstine & Osborn, Inc.	Agency—Batten, Barton, Durstine & Osborn, Inc.
THE HINDE & DAUCH PAPER CO. 69	VICTOR ADDING MACHINE CO. 51
Agency—Howard Swink Adv. Agency	Agency—John W. Shaw Adv., Inc.
HYATT BEARINGS DIV., GEN'L MOTORS CORP. 30	WARNER & SWASEY CO. 2nd Cover
Agency—Campbell-Ewald Co. of N. Y., Inc.	Agency—The Griswold-Eshleman Co.
INTERNATIONAL CHAIN & MFG. CO. 65	WESTINGHOUSE ELECTRIC CORP. 45
Agency—The Altkin-Kynett Co.	STURTEVANT DIV. 11
INTERNATIONAL MINERALS & CHEMICAL CORP. 11	Agency—Fuller & Smith & Ross Inc.
Agency—C. Franklin Brown, Inc.	WILLIAMS & HUSSEY MFG. CO. 110
JONES & LAMSON MACHINE CO. 105	Agency—Tippett, Jackson & Nolan
Agency—Henry A. Loudon, Adv.	WILLYS-OVERLAND MOTORS, INC. 14
KIMBERLY-CLARK CORP. 31	Agency—Erwin & Thuermer Associates
Agency—Foote, Cone & Belding	WORTHINGTON PUMP & MACHINERY CO. 109
KNOX CORP. 122	Agency—James Thomas Chirug Co.
Agency—Ulric C. Jones Adv. Agency	THE YODER CO. 36
	Agency—G. M. Basford Co.
	YOUNGSTOWN SHEET & TUBE CO. 33
	Agency—The Griswold-Eshleman Co.

THE TREND

Why Nationalize?

For the benefit of those who are watching the course of postwar experiments in nationalization of industry as a means of getting production, we have reports on two time-tested operations.

The first report compares the performance of the Mexican oil industry in locating new oil supplies before and after it was expropriated by the government.

In three fairly normal years before expropriation, the industry drilled an average of about 100 wells a year, of which about 14 each year were exploratory or "wildcat." Eight new fields were discovered in the three years. In the first seven years after expropriation, the government company drilled an average of 26 wells a year. Less than two a year, on the average, were "wildcat." And no new fields were found in all the seven years.

From 47-million barrels in 1937—the year before expropriation—crude production dropped to 38-million barrels in 1944, although demand both in Mexico and throughout the world had increased greatly. Since 1947, the company has pushed drilling somewhat, and has raised production to just above the 1937 level.

In contrast, production in the United States in the years since 1937 has been almost doubled.

Our second case-history on the capacity of nationalization to produce the oil hits home to Britain. It is a report from the Chicago Daily News that the 10-year-old Arabian-American Oil Co. will shortly overtake the 37-year-old Anglo-Iranian Oil Co. and become the largest producer of crude oil in the Middle East.

"One reason why the young American company has been able to outdo its older British rival," says the report, "is the fact that a majority of Anglo-Iranian's stock has been owned by the British since World War I.

"Whereas Arabian-American has been free to risk huge sums of private capital, Anglo-Iranian has been held back by over-cautious governments fearful of risking public capital."

"Arabian-American has also been able to use the superior production methods of its four American parent companies, which are years ahead of their British rivals in equipment and know-how."

As a result, Arabian-American has increased its production this year from 300,000 to 375,000 barrels a day. The British company has been producing just under 400,000 since the end of World War II.

The advocates of nationalization are sure to make the point that what it lacks as a producer it makes up as a conservor of precious petroleum resources. It is true, of course, that undiscovered oil remains a resource for somebody, sometime. By following that argument to its logical conclusion, however, we would arrive at the view that the lucky fellow, so far as oil is concerned, was the primitive cave dweller who saved all of the avail-

able resources (though he didn't know it), while living in the dark or by the occasional light of a brush torch.

As far as getting oil to the point where it is useful—a critically important operation at this juncture—the record indicates that private operation runs rings around government operation, with its heavy burdens of caution and red tape.

Light on Inventories

If you use inventory figures as a major guide in estimating the course of business, you can now employ a new tool with a sharper cutting edge.

A new insight into the "why" behind the movements of inventories comes from the National Bureau of Economic Research, and a study by its inventory expert, Dr. Moses Abramovitz. The study points out that no simple, general explanation of the ups-and-downs of inventories will hold water. It cannot because they are not a complex composed of the same things: They include every product that is processed.

True, in the course of the business cycle, actual holdings of inventories in general lag behind production by six to nine months. Inventories continue to rise for some months after production falls off, and they fall for some months after production has begun to perk up.

The reasons behind this lag, however, are an intricate combination of conditions which affect each important category of inventories in a different way.

Looking at manufacturers' stocks, Dr. Abramovitz shows there are at least seven major classes of inventories. And each behaves differently.

Stocks of materials in process are geared to output. They rise and fall in almost perfect unison with production cycles. Raw material inventories, on the other hand, lag behind cycles in output by about four months. The lag is shorter when materials are produced locally, longer when they come from distant sources, or are bought on long-term contracts.

Inventories of finished products show sharply varying characteristics. If the products are made to order, inventories are closely tied to output. If they are finished staples sold from stock, inventories may pile up for a year or longer after production turns down. Perishables, of course, show only a short lag. Agricultural raw materials, and the products made from them, often show irregular movements.

All this highlights the need not only for looking behind general figures, but also for getting better information on inventories by classes. Better information would help business control its inventories. Better control would stabilize general inventory fluctuations. And, since swings in inventories have an important effect on the ups-and-downs of business, this would contribute importantly to a much-sought stability of the whole economy.

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13

240

230

220

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